SOAP AND CHEMICAL SPECIALTIES

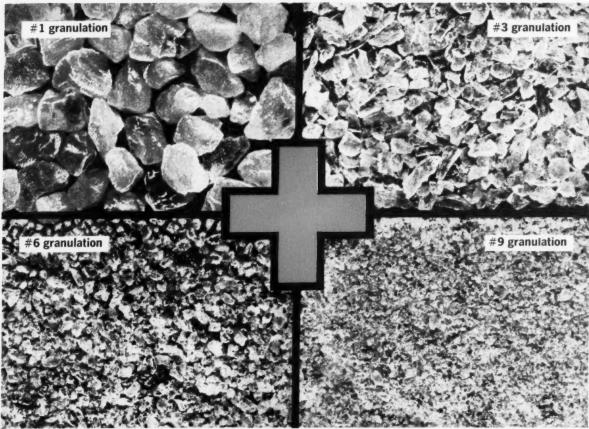




Newest addition to Gillette Co's line of men's toiletries is "Right Guard" personal deadorant. Three ounces of product, which contains hexachlorophene, are pressure packaged in three-color lithographed can retailing for 98 cents.

N THIS ISSUE

lowest Surjectants Listed	53
6G President Speaks on Advertising	47
anadian Specialties Makers to Meet	77
orosols at Monnon Company	80



These four granulations of Solvay® Para-dichlorobenzene are shown actual size.

SEE SOLVAY FOR PARA-DICHLOROBENZENE

with a Plus!

+ QUALITY! Purity, color and appearance is unsurpassed. + UNIFORMITY! Size varies to a minimum throughout each granulation. + PROVEN PERFORMANCE! The choice of repackers, compounders and blockmakers alike. + FREE-FLOWING! Such smooth-pouring crystals.

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Allied Chemical Corporation
61 Broadway, New York 6, N. Y.

Please send Solvay Para-dichlorobenzene fact folder and samples of granulations indicated:

#1 #3 #6 #9

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Company

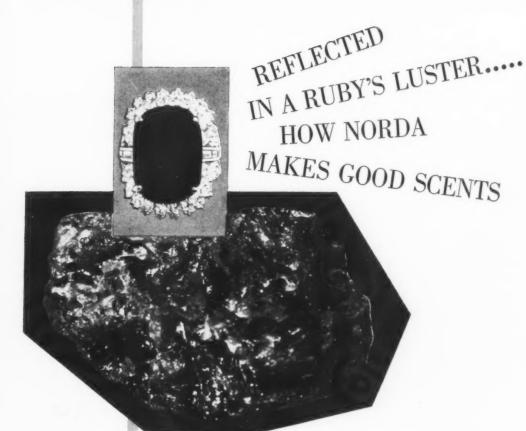
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You can see a ruby is worth the trouble to make every facet true. People prize the flawless gem most of all.

Norda never forgets that when making scents for you. Each one that comes from Norda must be true, with never an imperfection, carefully shaped from the finest of Nature's materials.

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Each of Candy's floor waxes are all-around to quality for certain traffic conditions. They impathe finest protection and beauty to floors for which best suited.

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BRIGHT BEAUTY®
CANDY'S SUPREME Special WR
SUPER CAND-DOX®
CAND-DOX® # CS

Other CANDY & CO.
HIGHEST QUALITY

CANDI-COAT 1000, WATER RESIN EMULSION—As a floor coating for use under specific conditions of continued maintenance on certain types of floors this water resin emulsion has none of the faults associated with coatings of this type. It is the finest product in its class produced up to this time.

EANDENTY #6000

Bright Beauty WAX REMOVER & all-purpose SURFACE CLEANER—For removal of water-emulsion waxes from any floor without harmful effects. It is the perfect maintenance program wax remover and all-purpose surface cleaner. Pleasant odor, crystal clear color and thorough cleaning action with all types of equipment. Unaffected by hard freezing. Furnished ready for resale or in concentrated form for local packaging...nothing but water to buy or mix in.

CANDI-CLEAN all surface—all synthetic CLEANER—This is an all synthetic and all purpose surface cleaner with free rinse and free wipe off qualities. Furnished in several colors and odors, and properly priced. Available in two concentrations for resale and in concentrated form for dilution with water for local packaging.

Bright Beauty CREAM FURNITURE POLISH—A cream furniture polish that spreads easily, polishes without excessive effort to a deep impressive lustre. Permits repeated repolishing with a dry cloth, thus saving many reapplications. A very economical polish of the very highest quality.

Bright Beauty PASTE WAX—Properly blended and refined from excellent quality solids and solvents that produce the best drying time and evaporation. Easy to handle, having "creamy" consistency and stability that lasts throughout storage and usage life.

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Bright Beauty GLASS POLISH & CLEANER and SILVER POLISH—As a glass cleaner (pink color) it applies evenly with little effort, wipes off easily with negligible "powdering" and produces an undeniable "feel" of cleanliness to glass. As a cleaner of silver, it polishes to a high lustre without abhasion and can even correct the abuses of scratchy "quick-polish" inferior products

Thight Beauty DANCE FLOOR WAX—Does not "ball-up" and gather dirt that impregnates floors with hard spots difficult to remove . . . free from dusty effects its protective quality adds more "floor-years" to expensive ballroom

Briving Beauty Heavy Duty PASTE CLEANER— Cleans and scours more effectively and quicker than most scouring powders. Depending on application, it can clean to perfection even painted walls to provide a suitable repainting surface. 100% active, free from excessive abrasive qualities, it frees almost every surface from all foreign matter.

CONTAINER SILK SCREEN LABELING—Now you can have dramatic, colorful labeling of your private brand name on all 55, 35, 30, 20 & 15 gal. drums and 5 gal. pails. This added service is accomplished right in our plant... your inspection in ited . . . or write for details.

* All Candy's products are available for private brand resale and are sold only through distributors except for experimental accounts in Chicago essential to research.

Beauty and Durability

Initial appearance is important, but for a waxed surface to remain beautiful, it must be durable. Durability depends not only on resistance to abrasion of traffica but oven more so on resistance to discoloring marks. Durability should be measured by how long the waxed surface maintains a nice appearance before complete removal and re-waxing is required.

Anti-Slip

Anti-slip, or reasonable safety underfoot, does not mean that the qualities of leasty and protection need be sacrificed. The proper balance—a wax film which is not excessively slippery, yet which is not tacky and does not collect dirt readily—gives the performance that answers the foremost original reason have of a floor wax—beauty and protection.

Water Resistance

Frequent damp mopping or wet traffic can make water resistance very important. Overdoing this quality when no problem exists out of the ordinary, simply increases the difficulty of complete removal or applying multiple coats. Removability must be considered as important as water-resistance under most normal conditions.

Solid Content

The percentage of solid content is not nearly as important as the **quality** of the solids. Good quality indicates 12% of solids as the answer for most well planned maintenance programs. Two applications of 12% gives better results than one of 18%. "Washed out" floors and other special problems maintain better when more concentrated waxes are used. Overwaxing and resultant greater difficulty in removal for periodic maintenance should be avoided.

Carnauba Wax

The most important features of a good wax ... all-around quality of performance ... are built around Carnauba Wax. When refined and compounded with other additives and scientifically controlled in manufacture, Carnauba imparts the beauty and protection that makes the use of floor waxes both profitable and possible. Make-shift manufacture or over-emphasis on any one given wax feature should be avoided and proper care taken to provide for most satisfactory performance.

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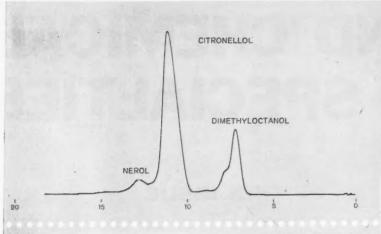
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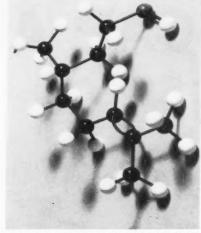
IN THIS ISSUE

- 39 AS THE EDITOR SEES IT
- 43 AS THE READER SEES IT
- 45 DETERGENTS, CLEANSERS, SOAPS
- 47 ADVERTISING FROM MANAGEMENT'S VIEWPOINT, by Howard J. Morgens
- 50 EVALUATION OF DRYCLEANING DETERGENTS (PART II), by Lloyd E. Weeks and John T. Lewis
- 51 HOOKER'S NEW MEXICAN PHOSPHATE PLANT
- 53 NEW SURFACTANTS LISTED, by John W. McCatcheon
- 69 CHEMICAL SPECIALTIES
- 77 CANADIAN SPECIALTIES MAKERS MEET
- 80 MENNEN'S AFROSOL PLANT
- 82 PREPARATION OF NONIONIC EMULSIONS OF POLYETHYLENE WAX. by M. O. Brunson and L. D. Queen
- 89 PESTICIDE RESIDUES, by L. K. Cutkomp
- 93 BRULIN'S 25th ANNIVERSARY, by Robert H. Brunner
- 99 CARNAUBA WAX MOLECULES (PART II), by Lee M. Prince
- 117 PACKAGING
- 119 PACKAGING NOTES
- 123 BETTER PACKAGES HELP CLICK BOOST SALES 25% IN EIGHT MONTHS
- 127 NEW TRADE MARKS
- 129 NEW PRODUCTS PICTURES
- 137 PRESSURE PACKAGING
- 142 AEROSOL PATENTS
- 145 PRODUCTION
- 147 LIQUID SYNTHETIC DETERGENTS
- 153 SOAP PLANT OBSERVER
- 157 NEW PATENTS
- 159 PRODUCTS AND PROCESSES
- 163 BOOK REVIEWS
- 197 CLASSIFIED ADVERTISING
- 204 ADVERTISERS' INDEX
- 205 MEETINGS CALENDAR
- 206 TALE ENDS

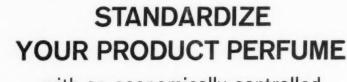
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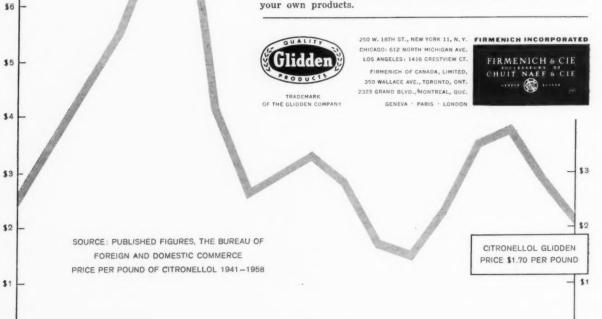
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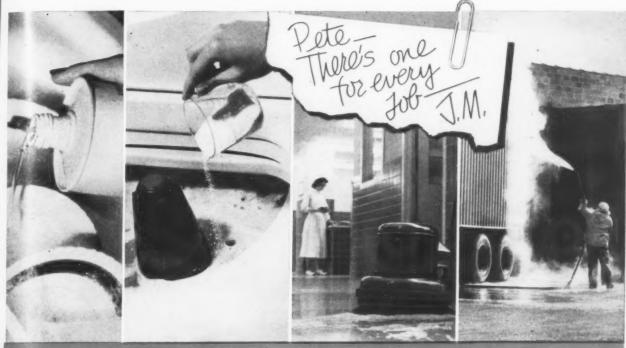
The right alkyl aryl sulfonate for every formulation



Which Ultrawet is right for you?

Check this chart...you'll find an Atlantic Ultrawet for every formulation!

	Ultrawet	Solids	Molecular Weight	Appearance	Active Minimum	Recommended Applications
LIQUIDS						
Clear	30DS	30%	Medium	Clear, pale yellow	25.5%	Penetrant, wetting agent, metal cleaner, emulsion polymerization.
	60L	60%	High	Clear, pale yellow	60.0%	Liquid detergents, wet textile processing, shampoos, car wash, household detergent formulations, janitorial supplies.
	35KX	35%	Medium	Clear, pale yellow	31.5%	Liquid detergents and household cleaners, wet textile processing, emulsion polymerization, post stabilizer for emulsions.
Slurries	35K	35%	High	Pale yellow	31.5%	Drum-dried and spray-dried cleansing compounds, light and heavy duty liquid detergents.
FLAKES	DS	100%	Medium	Light, cream colored	90%	Industrial detergents, emulsifier, dry mixing with alkalies, air entraining agent.
	K	100%	High	Light, cream colored	90%	Industrial detergents, heavy-duty household detergents, emul- sifier, dry mixing with alkalies.
	K Dense	100%	High	Light, cream colored	90%	Same as above.
	кх	100%	Medium	Light, cream colored	90%	Same as 35KX in dry form.
	KX Dense	100%	Medium	Light, cream colored	90%	Same as KX—except smaller particle size with increased density, air entraining agent.
BEADS	SK Bead	100%	High	White, free flowing	40%	Light-duty household detergents, dry mixing with alkalies.
	SK Bead High Density	100%	High	White, free flowing	40%	Same as above—synthetic wool washes, air entraining agent.



Ultrawet quality advantages give you...

1 High Detergency. Finished products can penetrate deep and fast resulting in a thorough cleaning action even in hard water.

2 Superior Foam. Your detergent produces copious quantities of foam with prolonged stability, affording more cleaning efficiency.

Chemically the Ultrawets are alkyl aryl sulfonate type anionic surface-active agents with less than 0.1% unreacted oil content. They are stable in acid and alkaline media; and their low sensitivity to calcium, magnesium, and other heavy metal ions makes them especially desirable in hard water. They are compatible with acid, alkaline, and neutral salts, soaps, anionic and nonionic detergents, and other materials commonly used in household and industrial cleaning compounds.

3 Light Color. The excellent, light colors of Atlantic Ultrawets produce better color and better color control of all finished products.

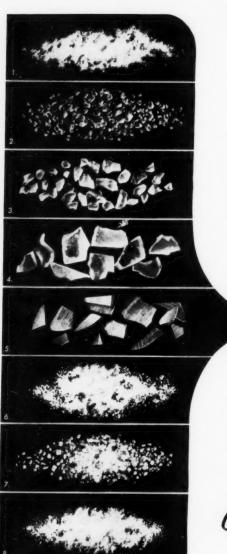
4 Freedom from Odor. Atlantic Ultrawets have minimum odor resulting in greater shelf-life odor stability.

You are invited to consult Atlantic's experienced sales engineers, graduate chemists and chemical engineers especially trained in formulations employing any of Atlantic's great variety of Ultrawets. Without obligation, you will receive technical assistance and information to improve products or processes, or for developing new applications, or for new ways to cut manufacturing costs. Write to Chemicals Division, The Atlantic Refining Company, 260 South Broad Street, Philadelphia 1, Pa.

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8. Powder 9. Granular

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melting point, and an exceptionally high stearic acid content. Neo-fat 18 is especially noted for its stability, purity, and uniformity from lot to lot. These advantages assure you longer storage stability and product shelf-life, better performance, and a quality reputation.

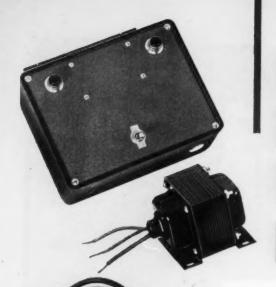
We'll be happy to furnish samples on request. If you'd like to learn more about the way Armour processes fatty acids, you are welcome to visit the Armour plant at McCook, Illinois. Phone or write for details.

See "Chemical Materials Catalog," pp. 291-298b for sales office nearest you.



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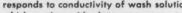


Four new mechanical dishwashing accessories: On the left . . . Dema's new Electric Controller; on the right . . . Dema's new proportional Rinse Injector; below . . . two new Liquid Dishmachine Detergent Feeders.

DEMA INTRODUCES A COMPLETE LINE

Each has an important place in today's mechanized kitchen . . . each is promotionally priced and engineered for easy installation.

Give your liquid dishwasher chemical sales a Dema injection today. Write for full information.



Simplified electrical circuit of sturdy components, coupled with a conductivity cell, responds to conductivity of wash solution which varies with detergent concentration. Green lamp indicates "power on"; red lamp signals need for more detergent. Three-part unit consists of: control head: transformer, and dip-type conductivity cell.

Model DC100 Detergent Control

Automatically controls amount of detergent fed into a dishwashing machine.

Model 219 Liquid Feeder

Dispenses liquid dishmachine detergent from any size bulk container through polyvinyl tube and discharges directly into wash tank. Integral solenoid water valve, responsive to electric controller, controls admission of a small flow of water to actuate feeder. Mounts readily to side of dishwasher.



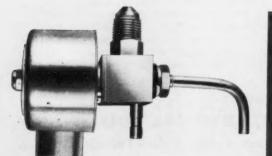
ENGINEERING COMPANY

Designers and Manufacturers of Automatic Dispensing Devices

10020 Big Bend Blyd., St. Louis 22, Mo.



Injects accurately metered amounts of rinse additive in direct proportion to the flow of water - not at a fixed rate. Has no electric wiring or moving parts . . . installs on either side of rinse valve . . . flow meter shows injection rate. Operates dependably on high or low water pressure. A two-stage venturi is utilized for positive injection. Additive supply is easily replenished while machine is functioning. Bottle holder adjustable for containers up to one quart in size.



Model 217 Liquid Feeder

Automatic liquid controller, timed and actuated by a small flow of water bled from final rinse line. Dispenses a pre-set quantity of liquid dishmachine detergent whenever fresh water is added to wash tank. Connects to bulk container through polyvinyl tube. Feed rate is adjustable for any machine and cycle.







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AFTER CLOSING ---

Purex Purchases Turco Products Corp.

PUREX Corp., South Gate, Calif., will purchase the outstanding shares of Turco Products, Inc., Wilmington, Calif. it was announced Oct. 11 by A. C. Stoneman, Purex president, and Sydney Thornbury, president of Turco. The transaction involves \$5,500,000—\$2,000,000 in cash and \$3,500,000 in subordinated notes. Turco will be operated as a Purex division and no changes in management will be made, according to the announcement.

The acquisition marks Purex's entry into a new market, since Turco makes industrial chemical specialties not previously sold by Purex. Franklin Research Co. of Philadelphia, purchased by Purex in 1959, specializes in industrial and building maintenance products. Its activities do not overlap those of Turco.

Turco's line includes industrial cleaning compounds; metal cleaners; paint removers; carbon and scale removers for aircraft and diesel engine parts; a wide range of specialties used in metal processing and fabricating; industrial washing equipment, etc. The company holds approximately 100 patents.

Turco sales for 1960 are estimated at \$14,000,000, net earnings at about \$500,000. In addition to its home plant at Wilmington, Turco has factories at Rockdale, Ill. and Houston, Tex.; and a limited operation at Okinawa. The firm has an equity interest in a number of European plants, located at Rotterdam, London, Paris, and Heidelberg. A wholly owned subsidiary, Turco-A.G., is located in Switzerland. Licensed manufacturers are situated in Montreal, Mexico City, Sydney and Manila.

In addition to its industrial

cleaning products, Purex markets a line of household soaps, bleaches, cleansers and detergents through grocery stores. A line of soaps and toiletries is sold to drug and department stores through Allen B. Wrisley Co. of Chicago, Purex's drug subsidiary.

Purex household chemical specialties in national distribution include: "Trend" light duty liquid and 'Trend" light duty dry detergent; "Sweetheart" toilet bar soap; "Beads O'Bleach" dry bleach; "Dutch" cleanser; and "Blue-White" dry bluing. Regionally distributed household products are: "Purex," "Fleecy White" and "Magic" liquid bleaches; "Little Bo-Peep" ammonia; "News" heavy duty detergent; and "Protex" deodorant toilet bar soap.

Purex reported sales of \$79,647,277 and earnings of \$3,331,126 (\$1.60 per share) for its fiscal year ended June 30, 1960. This represented an increase of 11 per cent in sales and 19 per cent in earnings over the preceding year.

Frank Finlay Retires

Frank Finlay, soap works superintendent for John T. Stanley Co., New York, since 1925, retired effective Sept. 1. A native of Perth, Ont., Mr. Finlay has now returned to Canada to live.

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Oran H. Digman of Hammond, Ind., has been appointed to succeed Mr. Finlay, Stanley announced. Mr. Digman was previously associated with Armour and Co. for 22 years.

Mr. Finlay joined Andrew Jergens Co. of Canada in 1912 at Perth, Ont. He served with the Royal Air Force from 1915 to 1918 and attained the rank of Flight Lieutenant and Pilot Instructor. After the war he returned to Andrew Jergens where he remained until 1925 when he came to John T. Stanley Co. in New York as plant superintendent.

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Pero in New Post

Garmold Division of Container Corp. of America announced recently the addition of Aldo S. Pero to their staff. Mr. Pero will serve as director of sales in the Garmold Division's activities in injection and processing plastic moldings of closures and other packaging components. He was formerly General Manager of processing extruders division of Foster Grant Company and recently Vice President of Fluid Chemical Company, Newark, N. J. Mr. Robert J. Dockman is Vice President of the Division and Mr. Don Cherba is General Man-

Ferguson NACA President

George R. Ferguson, president of Geigy Agricultural Chemicals Division of Geigy Chemical Corp., Yonkers, N. Y., was elected president of the National Agricultural Chemicals Association at the group's 27th annual meeting held Sept. 27-28 in Coronado, Calif. Herbert F. Tomasek, president of Chemagro Corp., Kansas City, Mo., was elected vice-president of the association.

A director since 1958, Dr. Ferguson served as NACA vicepresident last year. He succeeds Jack V. Vernon of FMC, New York, who served the association as

George R. Ferguson





A. F. Tomasek

its president for the past three years. Mr. Tomasek has been on the group's board of directors since 1959.

Reelected for another term were L. S. Hitchner, executive secretary and treasurer, and Miss Lee H. Grobe, assistant treasurer.

Three new directors were elected to the board for a three year term: Tom K. Smith, Jr., Monsanto Chemical Co.; W. F. Price, Swift & Co.; and M. C. Van Horn, Florida Agricultural Supply Co., Division of Wilson and Toomer Fertilizer Co.

Allstadt in 25-Year Club

Louis M. Allstadt, director and assistant secretary of George Lueders & Co., Inc., New York, was admitted to membership in the Lueders Twenty-Five Year Club at a luncheon given in his honor on August 29. The club members presented Mr. Allstadt with a watch and a set of luggage.

Shulton Elects Dey

Richard A. Dey has been elected secretary of Shulton, Inc., Clifton, N. J., it was announced recently. He succeeds the late Howard Engel.

Mr. Dey joined Shulton in 1944 as personnel manager; has served as director of industrial relations since 1955. Prior to joining Shulton he was associated with General Motors Corp.

Texize Sales Soar

Texize Chemicals, Inc., Greenville, S. C., only 15 years old, has increased its gross sales from \$330,000 in 1947 and \$3 million in 1955 to more than \$16 million last year, according to an article appearing in the *Du Pont Magazine* for Sept.-Oct.

While the first product Texize made was a textile size, which, Jack Greer, president, advises is the basis of the firm's name, its current inventory includes detergents, bleaches, starches, special duty cleaners, and new this year, a liquid laundry detergent, a liquid oxygen bleach, and a fabric conditioner.

Maintenance Buying Guide

The service products division of S. C. Johnson & Son, Inc., Racine, Wis., recently developed guides for buying floor maintenance and cleaning supplies.

The guides give shortened specifications and detailed information on the performance characteristics of floor finishes, waxes, cleaners, and specialized building maintenance products. Discussions on recommended uses and accepted methods of testing of the products are included also. Each set of specifications is packaged in a file folder for easy reference.

CSC Advances Luedeke

Arthur W. Luedeke has been advanced to sales manager of the industrial chemical sales depart-

Arthur W. Luedeke



ment of Commercial Solvents Corp., New York, it was announced late last month by W. Ward Jackson, vice-president of sales. Mr. Luedecke succeeds Frank E. Maple who now heads a newly created marketing department for CSC's nitroparaffin products.

In his new post Mr. Luedeke supervises the nation-wide marketing of methanol, ethyl alcohol, methylamines, formaldehyde and other chemicals for the processing industries. He makes his headquarters at the firm's executive offices in New York.

With Commercial Solvents since 1937 Mr. Luedeke previously held the post of manager of CSC's Mid-Atlantic office at Newark, N.J.

CSMA Proceedings

The Chemical Specialties Manufacturers Association has just published the proceedings of its 46th mid-year meeting held May 16-18, 1960 at the Drake Hotel in Chicago. The 254-page bound volume contains papers presented at the meetings, committee reports and records of other business transacted.

Each CSMA member and each registrant at the meeting receives one copy of the proceedings. Additional copies may be purchased from CSMA at 50 East 41st Street, New York 17, N. Y. Price is \$7.50 each in the United States and Canada, \$8.00 elsewhere.

New Butanol Plant

Plans for construction of facilities at Freeport, Tex., to produce butanols were announced last month by Dow Badische Chemical Co., jointly owned by BASF Overzee N. V. and Dow Chemical Co., Midland, Mich.

The plant's products, n-butanol and iso-butanol, will be sold through Dow Chemical Co. N-butanol is used in glycol ethers, brake fluids, agricultural chemicals, surfactants, and in a number of specialty chemicals. Iso-butanol is a widely used solvent. Completion of the plant and first shipments are scheduled early in 1961.

Business Practices Aerosol Division Topic

ADVICE on the economic aspects of aerosol manufacturing and marketing will be presented at one of the two sessions of the Aerosol Division at the 47th annual meeting of the Chemical Specialties Manufacturers Assn. to be held Dec. 5-9, at the Hollywood Beach Hotel, Hollywood, Fla. The other meetings of the Aerosol Division will deal with quality control in aerosol production.

Two prominent business leaders have agreed to appear at the session devoted to business practices, according to a recent announcement by Edward J. McKernan, E. J. McKernan Co., Crystal Lake, Ill. Mr. McKernan is chairman of the executive board of the Aerosol Division.

Elliot Averett, vice-president of the Bank of New York, will speak on "Financing Growth Industries." The second speaker of the session will be John A. Willis, assistant secretary and assistant treasurer of Union Carbide Corp., New York. He will discuss "Good Business Accounting Practices."

"Credit Procedures and Problems of the Aerosol Industry" will be reviewed by a third speaker at the session. His name will be announced shortly.

The quality control session of the Aerosol Division will cover such topics as quality control requirements for valves, containers, propellant and propellant systems, concentrate and concentrate systems, production line operation, finished product certification, and laboratory quality control. Also slated to be discussed are application of statistical quality control to aerosol filling, special quality controls required for such products as pharmaceuticals and foods in pressure packages, and quality control procedures expected of the filler by the marketer.

Programs of the five other divisions of which CSMA is composed remain at this writing unchanged from the program as outlined in the September issue of Soap & Chemical Specialties.

CSMA Award to MacNair

Ira Preston MacNair, president of MacNair-Dorland Co., New York, publisher of Soap & Chemical Specialties magazine, has been selected to receive the 1960 Achievement Award of the Chemical Specialties Manufacturers Assn. Announcement of the eighth award winner was made during a meeting of the Board of Governors of the Chemical Specialties Manufacturers Assn. in Wilmington, Del., Oct. 3-4. The award, which is in the form of a scroll, has been given annually, with the exception of 1957, since 1952. The basis of the award is "distinguished services to the chemical specialties industry."

Mr. MacNair, who is 67, was, for many years dating from its inception in 1925, editor of Soap. The magazine is the official publication of CSMA. Mr. MacNair served for five years (1936-41) as secretary of the National Association of Insecticide & Disinfectant Manufacturers, which later became CSMA. He has been a member of the Board of Governors of CSMA, most recently from 1955-58. In addition he has served on many committees of the association, and is presently a member of the Policy Advisory Committee and the Budget and Finance Committee. Mr. MacNair has been active in chem-

Ira P. MacNair



ical industry trade associations, including the Association of American Soap & Glycerine Producers.

The 1960 Achievement Award will be presented to Mr. MacNair during the 47th annual meeting of CSMA at Hollywood Beach, Fla., Dec. 5-9.

Speakman in New Post

Merle P. Speakman has joined Federal Chemical Co., Indianapolis, as vice-president in charge of sales, it was announced recently by H. B. Jordan, president. Federal makes the "Arab Pest Control" line of products marketed to pest control operators in the central and southern states. In addition, the firm ditributes a retail line of household insecticides through department stores and lumber yards.

Mr. Speakman retired in June of this year as vice-president of J. I. Holcomb Manufacturing Co., Indianapolis. He had been associated for 37 years with Holcomb, a manufacturer of floor finishes and other chemical specialties.

C-P Research Aide

Appointment of Janet Massing to the oral health research laboratories of Colgate-Palmolive Co., New York, was announced recently by Joseph H. Brant, director of corporate research.

The oral health research unit is part of C-P's corporate research and development department, and is located on the University Heights science campus of Rutgers University and functions in cooperation with it.

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Robinson-Wagner Rep.

Robinson-Wagner Co., Inc., Mamaroneck, N.Y., manufacturers of lanolin and lanolin derivatives, announced last month that Philip J. Wagner joined its staff as a sales representative. Mr. Wagner supervises sales for eastern territory.

Mr. Wagner was formerly assistant sales manager, eastern territory, of Zenith Radio Corp.

UBS Adds Staff, Facilities

Kenneth King, Jr., was appointed manager of commercial development and Harold O. Walsh was named personnel director by UBS Chemical Co., Cambridge, Mass., it was announced recently by Paul W. Atwood, president. UBS makes "Ubatol" brand synthetic polymer emulsions for the floor polish industry.

Mr. King graduated recently with an M.S. in industrial management from Massachusetts Institute of Technology. Previously he had been associated with Polymer Corp., Reading, Pa. and with Pennsalt Chemicals Corp., Philadelphia. He also holds a B. S. in chemical engineering from M.I.T.

A graduate of Northeastern University, Mr. Walsh was formerly associated with Knox Glass Inc., Dayville, Conn., and with Corning Glass Works Division, Central Falls. R. I.

At the same time UBS announced a joint venture with Permutit Co., London, England, a producer of water treatment equipment and ion exchange resins. The "Ubatol" line will be manufactured at Permutit's chemical works in South Wales for distribution to the floor polish industry in the United Kingdom and on the European continent.

Monsanto Advances Four

Edward A. McAdam, district sales manager in Cleveland of the inorganic chemicals division

James Day, left, New York district manager of Dow Chemical Co.. Midland, Mich., newly elected president of the Drug, Chemical and Allied Trades Assn., accepts gavel from retiring DCAT president. William W. Huisking, president of Chas. L. Huisking & Co., New York. Annual DCAT meeting took place at Bolton Landing, N. Y., Sept. 23-25.





On dais at Cosmetic Career Women, Inc. luncheon, Sept. 27, 1960, at the Waldorf-Astoria Hotel, New York. Left to right: Miriam Baumgarten, Publicker Alcohol & Chemical Sales; Centa Isermann, president, Van Dyk & Co., guest speaker who discussed "Chemistry & Cosmetics—A Great Team:" Eve Henriksen, Dana Perfumes Corp., luncheon chairman; June Clark, Macfadden Publications, and Dolle Condon, Ungerer & Co. Over 100 members and guests attended.

of Monsanto Chemical Co., St. Louis, was made director of sales-field operations, as announced last month by J. E. Crawford, Jr., director of marketing. Mr. McAdam's new headquarters are in St. Louis.

Three other promotions were announced at the same time: Barton MacDonald, assistant district sales manager in New York, succeeds Mr. McAdam; James L. Brown, supervisor of phosphorus and phosphoric sales in St. Louis, goes to Atlanta as district sales manager; and O. Lee Ryser, assistant district sales manager at Houston, becomes district sales manager there.

Calif. Plant for Plax

Plax Corp. of Hartford, Conn., is currently constructing a plastic container plant on a 18.5 acre site at Anaheim, Calif., it was announced recently by R. F. Elder, Plax president.

The new building will have a total floor space of 67,000 square feet of which 60,000 will be devoted to manufacturing facilities and 7,000 to office space. Plax makes plastic "squeeze" bottles and other containers for household chemical specialties, toiletries, and other specialty products.

Owned equally by Monsanto Chemical Co. and Emhart Manufacturing Co., Plax is currently also building a new plant at Cincinnati in addition to its manufacturing facilities in Stonington and Deep River, Conn., and Ligonier, Ind.

New Eastman Quarters

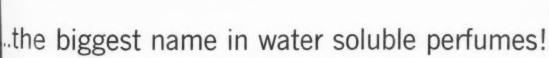
The chemicals division of Eastman Chemical Products, Inc., subsidiary of Eastman Kodak Co., recently announced that construction of new quarters for the sales service and product development laboratories has started in Kingsport, Tenn.

Two functions of the 60,000 square foot laboratories are to aid customers using Eastman's industrial and specialty chemicals, and to develop new markets. Among the groups in the chemicals division that will be represented in the completed laboratory are functional fluids, such as hydraulic fluids and synthetic lubricants, and low molecular weight polyolefins, including polishes.

Ernest R. Durrer, president of Givaudan-Delawanna. Inc., New York, returned late last month from an extended business trip to Europe, where he visited headquarters of the parent company, Givaudan Cie., in Geneva, Switzerland. He also visited the Givaudan offices in Paris and London.



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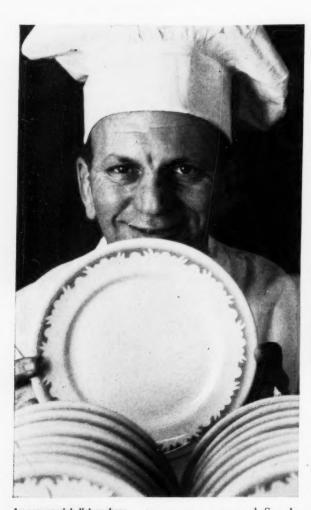


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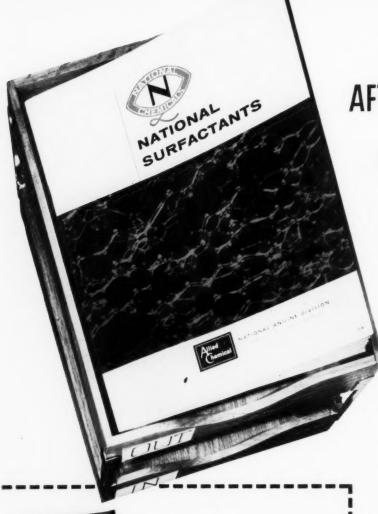


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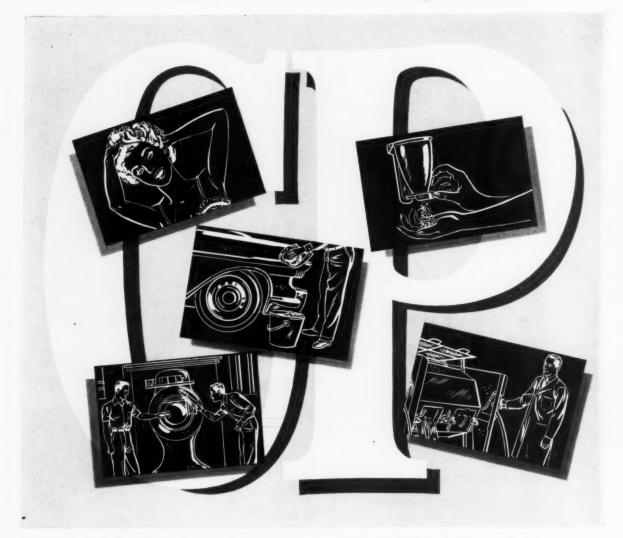
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(Special Mesh)	+100	89.0%	+ 100	min. 88%
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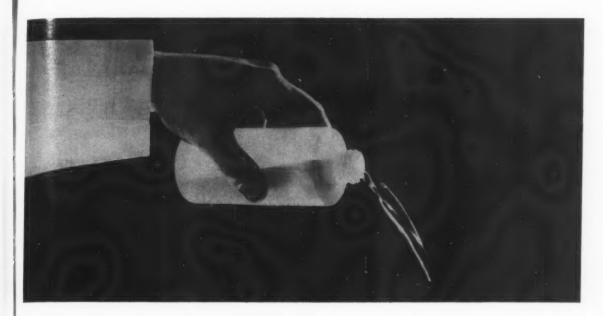
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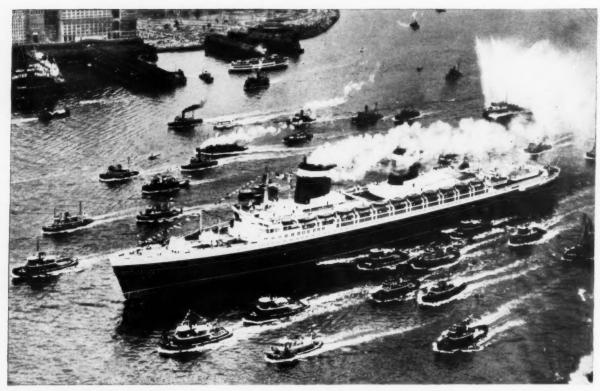


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With one of the biggest electrolytic caustic-chlorine plants in the industrial east . . . situated for fast access to railway mainlines, waterways and highways . . . we can give you superior service on both NaOH and KOH.

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Liquid 73% Liquid 50%, Regular and Low-Chloride Grades; Flake, Solid and Ground.

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45% and 50% Liquid;
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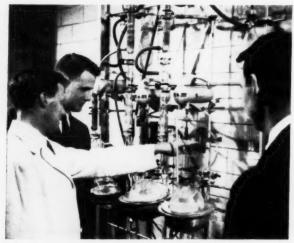
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ENJAY OLEFINS Enjay markets tetrapropylene, tripropylene and nonene. These chemicals fulfill the most rigid requirements as raw materials for anionic and nonionic detergents. Uniform purity and high quality contribute to the modern detergent's ability to get hard-to-wash surfaces cleaner.



TRIDECYL ALCOHOL Water soluble nonionic surface active agents formed by the reaction of tridecyl alcohol with ethylene oxide are extremely well suited for use as household detergents. Surfactants made with tridecyl alcohol help increase penetrating power and loosen dirt.



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HOW ENJAY SERVES...the surfactants industry

Enjay offers the surfactants industry the following high quality materials for all types of detergents, wetting agents, emulsifiers, sanitizers and foam control agents: Tetrapropylene • Tripropylene • Nonene • Tridecyl Alcohol • Decyl Alcohol • Isooctyl Alcohol • Isopropyl Alcohol •

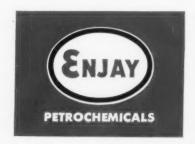
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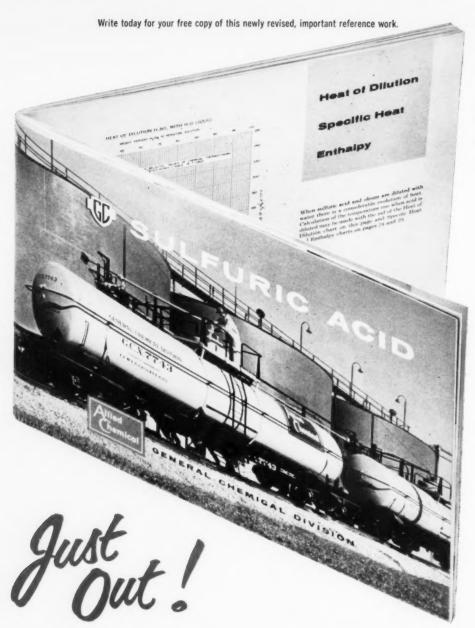
ENJAY CHEMICAL COMPANY

A DIVISION OF HUMBLE OIL & REFINING COMPANY





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New enthalpy curves . . . appearing for the first time . . . enable sulfuric users to calculate heat developed and final temperatures when acid is diluted with water.

New edition of General Chemical's valuable sulfuric acid data book!

Here is a revised edition of General's now-classic technical brochure on sulfuric acid—40 pages of charts, graphs and facts from America's foremost producer. This is a comprehensive technical manual with a wealth of data selected for its practical value to sulfuric acid users. Charts have been revised for easier reference, and up-to-the-minute information has been included on uses, manufacture, properties, storage, handling and methods of analysis. Booklet contains material not available from any other source.

If you use sulfuric acid, you cannot afford to be without this valuable reference work. For your free copy write General Chemical on your company letterhead.



GENERAL CHEMICAL DIVISION

40 Rector Street, New York 6, N.Y.

as the editor sees it...

COUPONING

A recent survey of coupon redemption at the checkout counters of 637 chain and independent supermarkets covered a total of 136,000 shoppers. The average of misredemption shown by the survey which included 71 major market areas was 16 per cent. The percentage of misredemption varied widely from area to area. In ten of the worst market areas, 62 per cent of all coupons were misredeemed. In other areas, no misredemptions were noted. The survey was conducted on the three days immediately following heavy mail couponing of an area.

This survey confirms what soapers already knew, that coupons are being misredeemed. But the big problem is how to stop the practice. Appealing to the fair-play feelings of the average consumer as one large soaper has done is in our opinion futile. The supermarkets know this only too well. That's why they keep the chewing gum, cigarettes, small package candy and other small items right under the cashier's nose—so they will not be stolen. Much the same applies to coupons. We are dealing with petty thievery. The problem should be treated as such. Why try to appeal to a propensity for fair play when it doesn't exist?

FLOOR WAXERS

From all appearances, the number of small independent floor waxing outfits is growing by leaps and bounds. We have no figures to back up our observations, but it seems that all over in urban and suburban communities more and more floor waxers are popping onto the scene. Ten, or even five years ago, we have no recollection of noting as many of them around and about as we do today. Some of them we happen to know are expanding their businesses aggressively, mostly among householders and small merchants. Mostly, we believe, they are replacing the do-it-yourself floor waxer. Then again, there is the distinct possibility that they are

waxing floors that were never waxed before.

We feel this expansion in small waxing independents is a good thing. First of all, they make certain that floors are waxed regularly which means better protection for the floors and the use of more floor wax. They will not skip a waxing. If they do, they don't get paid. Normally, they do a better job, a professional job. They are constantly scouting for new customers, some of whom were bound to be on the no-wax list. They are front line troops in the battle to keep waxable floors regularly and properly waxed. We believe that the wax manufacturer should give them every encouragement. Exactly how, is a problem which requires some study as they are a relatively new and unorganized group. But we feel that technical help and guidance are worth looking into.

LIABILITY

Reports of more and more product liability suits are getting into the newspapers these days. The number of law suits based on damages, real or imaginary, supposedly caused by manufactured products continues to grow. They run the gamut of everything from automobiles to washing powder and include insecticides, hair lotions, deodorants, and a long list of drugs. Aerosols seem particularly vulnerable.

And what is more disturbing to manufacturers is that the increased number of liability cases seems to be bringing a higher percentage of damage awards by the courts. Definite proof of consumer negligence seems to become less important than heretofore in an apparently changing view of a manufacturer's responsibilities. The recent adoption of the Food Additive Amendment to the Food, Drug & Cosmetic Act is not going to help much as far as product marketers are concerned.

Just why there are more product liability suits may come principally from two causes, a changing attitude on the part of the courts and

THERE'S A PROCTER & GAMBLE PRODUCT FOR EVERY

FORMULATION

NEED



A neutral synthetic detergent and wetting agent whose active ingredient is mainly sodium alkyl sulphate. Excellent sudsing, wetting, dispersing and penetrating properties. Ideal for paste and liquid shampoos, bubble baths, liquid detergents, liquid car washes, liquid floor cleaners, insecticides, glass cleaners, rug and upholstery cleaners.



A neutral nonionic synthetic detergent of the 100% alkyl-phenol ethylene oxide condensate type. A light-colored liquid with a

clean, pleasant odor. Its superior

detergent, wetting and emulsifying properties offer excellent

performance in liquid detergents, sanitizer detergents, self-emulsi-

fying solvents, laundry detergents, glass, textile and dairy

cleaners, insecticides, and bottle washing compounds.

AMBER GRANULES

A neutral 88%, 42°C titer type soap of outstanding purity and uniformity. Well suited for the preparation of paste or gel-like products because of its high titer. Its granular form makes it ideal for powdered products. Excellent for the compounding of hand cleaners, paste cleaners, polishes, lubricants and coatings.



AB GRANULES

A neutral synthetic detergent, wetting and emulsifying agent of the 40% active sodium alkyl aryl sulphonate type. A white spray-dried product that can be used effectively in the blending of bubble baths, car washes, dishwashing compounds, dairy cleaners, insecticides, laundry detergents, rug and upholstery cleaners.



IVORY BEADS

A medium titer, neutral spraydried white soap of exceptional purity and quality. Well suited for compounding products where a mild but effective soap is required—hand soaps, polishes, protective creams, dishwashing compounds and paper coatings.



ES PASTE

A specially developed synthetic detergent whose active ingredient is mainly modified sodium alkyl sulfate. Offers exceptional efficiency and stability over a wide range of operating conditions. Its excellent wetting, penetrating, sudsing, dispersing and emulsifying properties make it well suited for the preparation of liquid shampoos, bubble baths, liquid detergents, liquid floor cleaners, insecticides, car washes, emulsion cleaners.

Procter & Gamble will gladly supply you with information on how you can save time and money when you formulate with Procter & Gamble products. You can also get technical help in connection with their use by writing to:



Procter & Gamble

BULK SOAP SALES DEPARTMENT P. O. BOX 599, CINCINNATI 1, OHIO



K LIQUID

A modified, highly concentrated ammonium lauryl sulphate—modified for increased sudsing and mildness. Exceptionally low cloud and pour points. Highly fluid and easy to handle, Ideal for clear liquid shampoos and liquid detergents where high foaming is required.

a growing number of eager-beaver attorneys anxious to secure money awards for aggrieved consumers, mostly on a contingent basis. Neither augurs well for the manufacturer of consumer products. But the larger manufacturer knows quite well what to do and is equipped to do it. The small manufacturer, however, could well be on the spot.

Maybe this situation will bring fewer extravagant advertising claims, more caution in label preparation and a reduction in rushing products to market half-cocked to beat competition to the punch. But let every manufacturer be alerted to the fact that the threat of lawsuits sits more prominently on his doorstep than ever before. And to do everything in his power in advance to stall off such threats.

DRINKING WATER

The bugaboo of synthetic detergents getting into our drinking water in certain localities has been raised once again, this time by Consumer Bulletin, published by Consumers Research, Washington, N. J. The article mentions that detergents in drinking water can come from the overflow of septic tanks, and "can and do carry septic tank bacteria with them." They warn that if septic tank and well are too close together, beware. And rather than go to the expense of drilling a new well or relocating the septic tank, switch back to soap and discontinue using detergents. They fail to mention that any drinking water supply system if it is contaminated by a septic tank overflow is unfit for use, no matter whether the family uses soap, detergents or mucilage to wash themselves and their dishes, or uses the water to mix with scotch for an evening libation.

In recommending that everybody go back to soap "to avoid contamination of the water supply with harmful bacteria," they fear that the synthetic detergent problem may get out of hand. They quote the recommendation of the Rhode Island Department of Health that at least

100 feet should separate any well from the nearest sewage disposal system. All in all, we feel that they have germs, detergents, soap and water supplies well mixed up in an involved tangle. The chief trouble with faulty information of this type is that lots of people will read it and some may believe it.

COST CUTTING

Corporate saving is in the air! What with profits for the last six months dropping from \$1.18 per share to \$1.12, executives everywhere are girding up their loins for the great fight on expenses. It happens every few years. Sales quit expanding, profits drop a bit, and the heat is on. The "profit squeeze" is here. All departments are alerted to cut costs. Management uses it as an excuse to sound the death knell of older plants and older employes who have been drawing too much money anyway. It happened back in 1957-58, and now the great cost-cutting crusade of 1960 is here.

Automation is a part of this and preceding crusades. Automate and save! For the larger plant, it may have much merit if it is not just hog-wild automation without rhyme or reason. But for the smaller outfit, — watch your step! It can be costly and unnecessary. We've seen it happen. New types of equipment require different operators from the old-time workmen. Plant maintenance crews have to be highly trained to deal with the new machines. The very modern plant requires less labor, — and labor is the most costly commodity in these United States,—but of more intelligence and skill.

Labor saving and cost cutting are wonderful if they are not inspired by hysteria. If it takes a profit drop to focus attention on possible and sensible cost cutting, then management has heretofore been derelict in its duty. Arm waving and talk of cost cutting to appease stock holders is one thing. Plain horse sense in automation and cost cutting is another.

She's looking for something better in cosmetics



... supply it with CARBIDE's triethanolamine

Emulsions made with triethanolamine soaps are ideal bases for cosmetic creams, lotions, and pharmaceuticals. Since their water solutions are essentially neutral, amine soaps don't injure skin or fabrics. Such preparations have an attractive texture and body . . . give a pleasant feel to face and hands. And they are easily removed with water or tissues.

CARBIDE's triethanolamine, mixed with fatty acids to form amine soaps, gives emulsions the consistency of petrolatum. Its solutions in water show marked detergent properties, useful in shampoos and in cleansing and vanishing creams. Brushless shaving creams with good softening, wetting and lubricating action are easily formulated with these bases. Pharmaceutical emulsions for external use can be efficiently prepared with triethanolamine and isopropanolamine as the starting point.

Shipments of Carbide's triethanolamine are made in 55-gallon drums, LCL or carload lots; you can save by ordering in combination with other Carbide products. Ask a Technical Representative in any Carbide office for information on possible savings through choice of shipment's size.

Starting formulas for a variety of cosmetic products are included in the 100-page book, "Emulsions and Detergents." In addition, you'll want a copy of "Alkanolamines and Derivatives," containing information on applications and properties of Carbide ethanolamines. For a copy of each book, write Dept. H, Union Carbide Chemicals Company, Division of Union Carbide Corporation, 270 Park Avenue, New York 17, N. Y.

UNION CARBIDE
CHEMICALS COMPANY

UNION CARBIDE

as the reader sees it...

Wax Article Reprints

Editor:

I have read with interest your comments under the heading "Waxing" on page 41 of the July issue of Soap & Chemical Specialties. I should be most grateful if you could let me have a copy of the recent report on a research study made on behalf of the Waxes and Floor Finishes Division of the Chemical Specialties Manufacturers Assn.

G. H. Webb, General Works Mgr., Ronuk, Ltd. Portslade, Sussex, England

We have sent Mr. Webb a set of tear sheets of the article, "Waxing Enhances Floors," which appears in the August and September issues of "Soap & Chemical Specialties." Reprints of the article will be available shortly. Anyone desiring a copy should write to the editor of "Soap," 254 W. 31st St., New York 1, N. Y. Ed.

Aerosol Information

Editor:

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Our company sponsors a Junior Achievement group here in Houston which in the the past few years has built a refrigerated acrosol loading apparatus and has engaged in the "manufacture" and sale of a "Freon" propelled fire extinguisher. We are now seeking information on other products which could be packaged by this group.

Accordingly, we are seeking information on the products which are now being sold in aerosol cans and we understand your publication, Soap & Chemical Specialties, has made recent surveys of aerosols. We would appreciate any such information in the form of reprints, etc., which you might have and which would be helpful

and educational for these young people.

E. D. Redding, Brown & Root, Inc. Houston 1, Tex.

We have sent Mr. Redding tear sheets and reprints of articles which might be helpful. If suppliers of aerosol components or contract fillers would care to help out the "competition," we're sure it would be appreciated. Ed.

Emson Independent

Editor:

On page 164 of the September issue of Soap & Chemical Specialties, a description was published of a new 13½ cc. stainless steel inner container for purse size aerosol products developed by Emson Research, Inc. The story stated that the container will be manufactured exclusively by VCA, Inc., Bridgeport, Conn., described as Emson's parent company. Actually, the two firms are, and always have been separate and independent of each other.

Perhaps the confusion stems from the fact that other original Emson developments, most notably its patented metered aerosol valve, are being manufactured under license agreement by VGA and other firms. The new inner container, which offers a larger product capacity than similar types now in general use, is being made sólely by Emson and by no other firm.

Philip Meshberg, President, Emson Research, Inc. Bridgeport, Conn.

And then again the confusion may have arisen from the fact that Emson's own publicity release covering this development states "Complete packages and components for the Emson 13½ cc. unit will be manufactured exclusively by the parent company." Ed.

Hercules Ups Crittenden

Eugene D. Crittenden, Jr., recently has been appointed senior technical sales-service representative in the naval stores division of Hercules Powder Co., Wilmington, Del. Dr. Crittenden joined Hercules in 1951 as a chemical engineer at its research center, becoming a senior technical engineer in 1953.

The SS Hope, floating medical training center which is scheduled to leave for Southeast Asia sometime this fall to bring this country's advanced medical knowledge to newly developing countries, will have on board 100 cases of "Lysol" disinfectant donated by Lehn & Fink Products Corp., New York.



check into Airco's new polyvinyl alcohol resins IN THESE **PLASTICS SPECIALTIES ADHESIVES* TEXTILES** PAPER FIELDS . SURFACE MOLDED **EMULSIONS** COMPOUNDING SIZING SIZING **PRODUCTS** paper for hard-tocompression warp non-ionic FOR bind surfaces molded emulsifiers paperboard fast adhesion nylon hosiery extrusion types thickeners THESE yarns molded glassine remoisten-**FINISHES** COATING CERAMICS **FILMS** able types APPLICATIONS binders wet strength thermosetting water paper soluble types modifiers **OTHERS** grease colloidal non-permanent photosensitive resistant thickeners types coatings Supplied to solvent protective paperboard permanent the adhesives industry by Colton Chemical Co., Division of Air Reduction Co., Inc. coatings for resistant types metal, plastics gas imperbinders steel quenchant meable

Airco VINOL — a group of polyvinyl alcohol resins tailored for specific uses — offers advantages for a variety of industries. Available soon, Airco VINOL will open new possibilities for improving products and processes in such competitive fields as those listed above.

VINOL polyvinyl alcohol opens opportunities both to present users of polyvinyl alcohol and users of many competitive materials. Moderate price levels, together with the unusual versatility of VINOL polyvinyl alcohol, warrant its comparison, in many applications, with starch, casein, acrylics and other synthetic resins.

VINOL polyvinyl alcohol resins provide a wide range of characteristics such as water solubility, water resistance, adhesion to porous or non-porous surfaces, toughness, flexi-

bility. Other key properties are resistance to grease, solvents, rotting and tearing.

VINOL grades represent a range of properties, reflecting differences in degree of hydrolysis and polymerization. However, all dissolve easily in water and form colorless solutions; all have little tendency to dust. Airco's exclusive continuous manufacturing process turns out resins of consistently high quality, free from variations often unavoidable in batch processing.

To receive the latest information about VINOL polyvinyl alcohol resins, check your interests above. We'll be glad to put your name on our mailing list to receive bulletins and samples as they become available.

AT THE FRONTIERS OF PROCRESS YOU'LL FIND.



AIR REDUCTION CHEMICAL COMPANY

A division of Air Reduction Company, Incorporated 150 East 42nd Street, New York 17, N. Y.

Represented Internationally by Airco Company International



Detergents... Cleansers...

Soaps

Advertising from a management viewpoint is discussed by Howard Morgens, president of Procter & Gamble Co., Cincinnati, during the eighth annual marketing conference of the National Industrial Conference Board in New York last month. Mr. Morgens, principal speaker at the three-day meeting, addressed more than 1000 business executives at the Sept. 15 dinner session. Full text of his speech page 47.

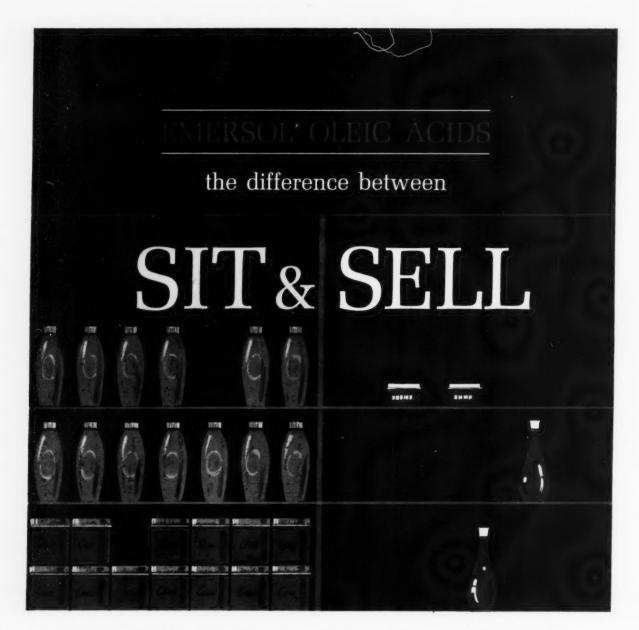
Aerosols **Detergents** Dishwashing compounds Floor scrubs Glycerine **Hand cleaners** Laundry soaps Liquid soaps Medicinal soaps Metal cleaners Potash soaps Scouring cleansers Shampoos Shave products Soap powders Starch

Toilet soaps and other detergent and soap products

Steam cleaners
Textile deteraents

Toiletries





Shelf space is valuable. Your product must move or it's moved out. Once out, it's next to impossible to get it back on the shelf. That's why the extra quality of the Emersol Oleic Acids is so extremely important to your profit picture — especially since they cost no more.

Here's what you buy at no extra cost with Emersol Oleic Acids. You get unsurpassed whiteness which reflects in the eye appeal of your product...invites customers to "reach for me." Outstanding color stability which assures that your product will retain its "buy appeal" through storage, shipping, shelf life, and use. High immunity to oxidation which keeps your product pleasant smelling and delicately colored through many cap removals. And you are assured of these "extras" with every shipment of Emersol Oleic because Emery's strict quality control never wavers.

Find out how you can add "sell" to your product at no extra cost. Request Emeryfacts booklet titled "Emersol Oleic Acids." Write Dept. S-10.



FATTY ACID SALES DEPT., CAREW TOWER, CINCINNATI 2, OHIO . . . a little extra everything except price

VOPCOLENE DIVISION, LOS ANGELES - EMERY INDUSTRIES (CANADA) LTD., LONDON, ONTARIO - EXPORT DEPARTMENT, CINCINNATI

ADVERTISING...

From management's point of view

By Howard J. Morgens*,

President, Procter & Gamble Co., Cincinnati

SEE in the audience a good many friends of mine both from advertising agencies and from companies which use advertising successfully in their business. I'm complimented that you are here, of course. However, it is a rather exacting assignment to speak before a group such as this, which is just as familiar with my subject as I am.

Mr. White** did try to build me up a bit by referring to my company as one of the largest advertisers in the United States. That was very nice of him in a way. But in another way I'm not so sure. In these days of anti-trust investigations, I can't help having somewhat mixed feelings about such a remark.

As long as the point has been raised, however, I might say just for the record that the National Industrial Conference Board reports that over 11 billion dollars were spent for all advertising last year. The largest advertiser in the country – whoever that may be – and regardless of the number of different products he had to support – probably spent only about one per cent of the total. And, of course, every advertiser competes with all others for the time and attention of the consumer. You can see then that, in reality, I represent a company which has only a very small voice in the total chorus.

In thinking about what I might say about a subject with which all in my audience are familiar, it seemed to me that the simplest and perhaps the most effective and authoritative thing I could do would be to tell you what we in Procter & Gamble regard as some of the most fundamental points about advertising — from a general management point of view.

Our company, as you know, has used advertising for a long time in many different parts of the world. We sell our products in a number of different countries with economies ranging from the fairly primitive all the way up the scale to that of the United States. We

advertise in countries with many different types of governments; with many different laws and public attitudes affecting advertising; and with media and techniques which are not nearly as well developed as ours are here. Perhaps, to some degree, this experience gives us an unusual vantage point to observe certain fundamentals about advertising, quite apart from the vicissitudes which affect it at any given moment here in the United States.

Some of these fundamentals, in our judgment, cannot be repeated too often. They need constant clarification and interpretation. After all, there is a great deal of nonsense about advertising circulating today. Madison Avenue seems to be replacing Wall Street as a whipping boy. The best answer to all this, it seems to me, is to restate certain basic principles concerning it and that's what I'd like to do tonight.

1. First of all, I want to start with a definition of the kind of advertising I'm talking about. I'm talking about the advertising of consumer products as distinct

^{*}An address presented before the eighth annual marketing conference of the National Industrial Conference Board, New York, Sept. 14-16, 1960.

^{**}Charles M. White, chairman of Republic Steel Corp., and chairman of the National Industrial Conference Board, introduced Mr. Morgens.

from industrial products. More specifically I'm talking about consumer advertising used in conjunction with well-organized sales effort and in support of good quality products which are priced right for the market place. When advertising is *not* used in this manner, it is often unproductive and wasteful. When it is used in this way, it can be very efficient and productive.

2. In connection with this definition I would like to make a special point of the fact that advertising is only a part of the total selling or distribution job.

Because advertising is so highly visible to the public, there is a disposition to regard it as an entity, separate and complete in itself. It's not.

From a general management point of view advertising can't be intelligently considered apart from other aspects of selling and distribution. From a public standpoint, advertising alone should not either be praised or damned for its effect on the economy. It is the combination of selling functions which provides the motive power.

It is meaningful, therefore, to appraise advertising expenditures mainly in combination with other costs of selling and distribution. There is, after all, no basic difference between the cost of advertising and the cost of salesmen. Salesmen are needed to get the manufacturer's brands into the retail outlets. Advertising is needed to move them out of those outlets into the hands of the public. The margins required by wholesalers and retailers are also essential parts of the total cost of distribution. Expenditures for all these functions-sales, advertising, wholesaling and retailing-all have the same basic purpose and all are required to sell products to the consumer.

The cost of each of these functions varies greatly between different industries and even between different products in the same industry. Therefore, advertising expenditures alone are not an accurate or complete measure of An answer to critics of U. S. advertising by one of the largest and most successful practitioners. Fundamentals of advertising from management's viewpoint reviewed.

relative selling costs or relative selling power.

3. Within the over-all distributing effort, advertising's chief role is that of selling the consumer. It is essentially a form of salesman to the consumer.

But it is not the only way to do that job. Advertising competes with other ways of selling the consumer and this point should not be overlooked.

In some countries, it competes with bazaars, street markets, peddlers who shout their wares, and the equivalent of old-fashioned pitchmen.

In our country, as one example, it competes with door-to-door salesmen. Don't think they aren't still operating here. One of our major competitors in the toilet goods field, for example, relies mainly on such salesmen for selling its products to the public.

Most importantly, however, advertising competes with private brands owned by large retail organizations which are steadily growing in size. It has been estimated that almost 20% of total grocery sales, for example, is currently in retail owned brands. And, of course, most nonfood items are also subject to retail labeling. Retail owned brands now represent in the United States very important and powerful competition to advertised brands of all kinds.

Occasionally one hears talk of a tax on advertising. If the cost of advertising should be increased disproportionately – through taxation or some other measure—these other methods of selling the consumer would certainly benefit.

However, regardless of the method, this job of selling the consumer must be done in every country and in every type of economy. Since the job must be done, it is naturally desirable to do it as effectively and efficiently as possible.

4. We in Procter & Gamble believe that advertising is the most effective and efficient way to do it. If we should ever find better methods of selling our type of products to the consumer, we'll leave advertising and turn to these other methods.

There are certain broad basic reasons for advertising's great effectiveness—reasons which go beyond mere dollars and cents calculations. They are fundamental to any appraisal of advertising from a general management viewpoint of view and they comprise my next few points:

5. Advertising can and does create new markets. It can do this more rapidly, more intensively, and less expensively than any other method of selling the consumer.

In our own industry the rise of personal cleanliness has closely paralleled the rise in advertising of soaps and detergents in every country in which we do business. In the United States, the social desirability portrayed by advertising of the daily bath, the daily clean shirt, and clean white teeth have produced cleanliness habits which are still relatively new in our society.

This is not to contend, of course, that advertising created a desire for cleanliness where none had existed previously. Only small boys have ever contended that it was not desirable. What advertising did was to remind people of something they wanted and to tell them about products that encouraged and facilitated cleanliness.

This general point about

advertising's ability to create new markets does not need much positive documentation here. In fact, advertising is currently being criticized in some quarters for doing this job too well. It is said to force people to buy products that they do not want. I'd like to digress just a moment in an effort to clear up this misunderstanding.

I'll say categorically that no amount of advertising can force any large number of people to buy things they do not want. Advertising can only create a new market for products which fill a genuine—though often unexpressed or latent—consumer want. In other words, advertising cannot develop a consumer want except where the need or desire previously existed—even though it may have existed in unrecognized or dormant form.

This is more than just semantics. Some people may say that what people are unaware of, they don't want. In the same sense that "ignorance is bliss," that's true. But people certainly won't buy a great many things that they might be made aware of. The basic need or desire must be there to begin with.

This is also more than just a theory. Let me illustrate how it works in actual practice:

Before setting out to create a new market for a new type of product, most sophisticated companies go through a process of testing that product with the consumer.

As part of this testing process, a group of people are asked to use the product "blind"—that is, without exposure to advertising, without a brand name, without labels or glamorous packaging. If the consumers so tested respond to the product favorably, if they recognize it immediately as "something they've wanted" or "would like to have"—then the company involved has a chance to develop a new market for it.

On the other hand, if—in the testing process — consumers should not respond favorably to this new type of product when exposed to it without advertising, then the surest way to go broke is to spend advertising money trying to create a new market for it.

There may be exceptions to this. However, based on our own experience, it is about 99 44/100% correct!

6. Another fundamental point about advertising is that properly used it does lower costs to the consumer. This is another point that never seems to be adequately understood.

It is true that advertising does, in itself, add to the cost of a product. However, it also results in savings that—in most instances—are greater than the cost of the advertising. It does this in many ways.

A. It brings about savings in manufacturing costs. This is well-known, of course. Advertising helps produce large volume on specific standardized items and this is what makes mass production methods possible.

B. Advertising also brings about savings in other types of distribution costs. The high volume which it creates lowers the salesmen's cost per unit. It also means rapid turnover for the retailer, which in turn makes lowe; retail margins possible — without reducing the dealer's profit on capital invested in inventories or shelf space. In this way advertised brands have helped make the low cost supermarket operation possible. And dealer margins, as I said,

Mr. Morgens



are one part of the total cost of distribution.

C. Advertising also brings about savings in buying, financing, and in many other business operations. Properly used, it tends to produce more stable volume week in and week out. Stability of volume results in great efficiencies and economies in practically everything that a company does.

Time and again in our own company, we have seen the start of advertising on a new type of product result in savings that are considerably greater than the entire advertising cost. When we consider all types of production costs, all types of distribution costs, and all other operating costs, the use of advertising clearly results in lower prices to the public.

Once a mass market has been created for a certain type of product-and once mass production equipment and techniques have been developed for that type of product-it is, of course, possible for someone else to take a free ride for a time by selling the same type of product at a lower cost by not using advertising. However, it would be a great fallacy to go on from there and to infer that all such products would be cheaper if there were no advertising on any of them. In fact, the contrary would be true.

7. Probably the most important point about advertising today, and one that is least understood, is its role in product improvement. It plays a tremendous part in the constant upgrading of consumer products.

Advertising cannot sell a poor product. It might induce people to try it once. But it cannot build an enduring business on such a product. That has been proven over and over again. In fact, the quickest way to kill a brand that is off in quality is to promote it aggressively. People find out about its poor quality just that much more quickly.

I'll go further. Advertising cannot sell a product for very long (Turn to Page 107)

Laboratory Methods for Evaluation of

Drycleaning Detergents

By Lloyd E. Weeks* and John T. Lewis

Monsanto Chemical Co. St. Louis, Mo.

PART II

HE drycleaning process consists of removing soils from fabrics in an organic solvent medium that is substantially free of water. Certain solvent-soluble, surface-active agents or detergents serve greatly to assist soil removal. Properties which aid in defining the efficacy of a drycleaning detergent are:

- 1. Clarity and stability. The detergent should be a clear solution and should not separate into phases under all use conditions.
- Solvent solubility. The detergent must be soluble in the solvent used under all practical temperature and concentration conditions.
- 3. Flash point. The detergent must have a sufficiently high flash point to be safe during storage, handling, and usage in the drycleaning process.
- 4. Redeposition prevention. Soil that is removed during the cleaning process should not be redeposited on the fabrics or load. Carbon black is selected for this test, since it represents one of the most objectionable soils encountered during drycleaning. The test consists of manual agitation of cloth swatches in a dispersion of carbon black mixed with a detergent solution. After the swatches are rinsed and dried, their loss in reflectance or loss of whiteness is measured. Detergents promoting good whiteness retention on cotton and wool cloth are expected to be

effective under practical use conditions.

- 5. Soiled wool detergency. A satisfactory drycleaning detergent must remove insoluble soils. One of the more difficult to remove soils is carbon black. In this test, wool cloth that has been soiled with carbon black and oils is baked to "fix" the soils. Then the soiled wool is washed with a solvent containing detergent, rinsed, and dried. After this, its reflectance is measured. Soil removal is calculated from reflectance measurements.
- 6. Water-soluble soil removal. Another class of difficult-to-remove soil is water-soluble type. One of the most common water-soluble soils encountered in practice is sodium chloride. Its ease of removal is influenced by both the type and amount of detergent as well as the water contents of the fabrics and solvent. In this test, viscose rayon cloth is padded with sodium chloride solution, dried, washed with detergent solution, rinsed, dried, and analyzed for quantity of salt remaining.
- 7. Solvent relative humidity. Water-soluble soil removal tests are best carried out under controlled moisture conditions. This is necessary since water-soluble soil removal varies directly with the moisture content of solvent. Moisture content of the solvent is adjusted to provide the same per cent moisture pick-up or regain to viscose rayon as if it were stored at 75 per cent atmospheric relative humidity.

Other tests such as effect of

detergent on solvent filtration and substantivity of detergent to fabric are outside the scope of these laboratory methods.

I. CLARITY AND STABILITY

Sample bottles, clear glass, 4-oz. capacity.

Refrigerator. Oven, 120°F.

Procedure: Fill three 4-oz. bottles with detergent and store for one week in a refrigerator at about 45°F., at room temperature, and at 120°F. Note whether clear or hazy, and whether there is phase separation.

II. SOLVENT SOLUBILITY

Equipment and Materials 100-ml. glass-stoppered cylinder. Stoddard solvent complying with ASTM D-484.

Perchloroethylene-technical grade.

Procedure: Make up one and four per cent solutions of detergent by volume. Store in a refrigerator at about 45°F, and at room temperature, An acceptable detergent must produce a clear solution under these conditions.

III. FLASH POINT

Determine flash point in accordance with Standard Test for Flash and Fire Points by Means of Open Cup (ASTM Designation: D-92-52).

IV. CARBON SOIL REDEPO-SITION TEST

Materials and Equipment

White wool flannel (Botany Style 404, prescoured), 2 x 4 in. swatches. Caustic desized white cotton muslin, 2 x 4 in. swatches.

250-ml. glass-stoppered cylinder. Stoddard solvent complying with ASTM D-484.

ASTM D-484. Perchloroethylene, technical. Lampblack, Monsanto Grinders

Reflectometer, Photovolt Model 610, with green tristimulus filter.

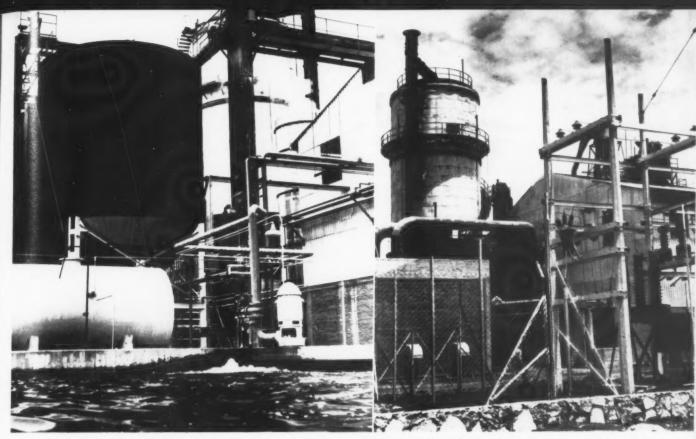
Support for cloth swatches; two concentric rings about 2-in, diameter to clamp swatches.

Procedure: Add 200 ml. of solvent containing two per cent by volume of detergent to the 250-ml, cylinder, Add 0.05 g. of lampblack. Stopper and shake. Place one wool and one cotton swatch in the cylinder. Stopper and shake for five minutes. Dump solvent. Add 200 ml. of fresh solvent, shake two minutes, and dump. Repeat rinse operation twice more with 200 ml, of fresh solvent each time. Allow rinsed swatches to air dry on paper towels. Measure reflectance of each dried swatches (backed up with an identical, untreated swatch) with reflectometer standardized by magnesium oxide equal to 100 per cent reflectance.

Per Cent Redeposition Prevention = Reflectance After Reflectance Before x 100

V. SOILED WOOL DETERGENCY (Turn to Page 105)

^{*}Paper presented at annual meeting of ASTM Committee D-12 on Soaps and Other Detergents, New York. March 14, 1960.



In photo, at left, of Hooker phosphates plant at Lecheria. Mexico, well water-fed reservoir is in foreground. Caustic soda storage tank and soda ash storage facility are at left. Plant is located 15 miles from Mexico City.

Another section of Hooker Mexicana phosphates plant showing left, rear, sodium tripolyphosphate spray tower; sodium tripolyphosphate building, right rear. Right front is transformer station; left, main sub station.

Mexican Detergent Phosphate Plant

NEW source of supply of sodium tripolyphosphate for the growing synthetic detergent industry of Mexico came into being recently when the plant of Hooker Mexicana, S.A., went on stream in Lecheria, Mexico, 15 miles from Mexico City.

The new Hooker unit, for which Arthur G. Tunstall, Jr., is general manager, is producing phosphoric acid, sodium tripolyphosphate and tetra sodium pyrophosphate. These chemicals were imported into Mexico from Hooker plants in the U. S. until Monsanto built a plant in Mexico City a year ago. This brought about a stop in the use of Hooker phosphates in Mexico until Hooker could set up a plant of its own.

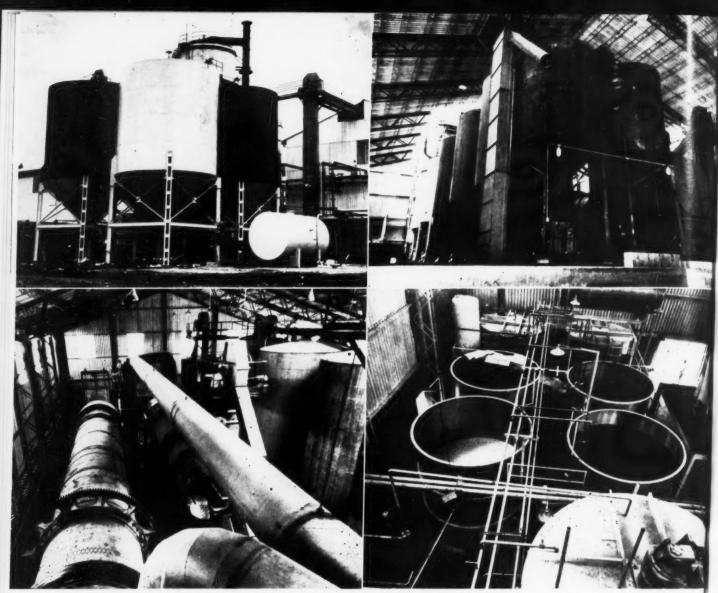
The growing soap and synthetic detergent industry of Mexico had sales estimated at about 390,-

Hooker Mexicana phosphates plant serves growing soap/synthetic detergent industry

000,000 pounds in 1959. Although the switch to synthetic detergents below the border has been slower than in the U. S., about half the total being synthetic detergents, it is expected that the Mexican figure will eventually be stabilized at the U. S. ratio of 75% synthetic deter-

Overall view of Hooker Mexicana plant, which is about 15 miles from Mexico City, showing: Marley water cooling tower (near foreground); soda ash storage tanks and unenclosed phosphorus burning equipment (left); phosphoric acid building (large unit, foreground); sodium TPP building (large unit, background); sodium TPP spray tower (top, rear). In near area, l. to r., eating area, transformer area, wash and change house, office.





Top left photo of new Hooker Mexicana plant shows: soda ash storage tanks (foreground) caustic soda storage tanks and conveyor system into phosphoric acid building (right), and top of sodium TPP spray tower (rear).

Top right photo: sodium tripolyphosphate finished product

storage tanks.
Bottom left: Rotary kilns in sodium tripolyphosphate building.
Bottom right: View of phosphoric acid building showing stainless steel phosphoric acid tanks and remix tanks where phosphorus, acid and soda ash are mixed.

gents, the balance soap.

Production capacity at the new \$1,200,000 Hooker plant is 30,000 tons per year, which coupled with a like output at the Monsanto unit is more than sufficient for present Mexican soap/detergent needs. However, Hooker is counting on a synthetic detergent output of close to half a billion pounds within the next four years to cut sharply into the present excess production of phosphates.

Three well-known names in the American synthetic marketing picture have plants in Mexico: Procter & Gamble, Colgate-Palmolive and Purex. In addition, two Mexican based firms, Fabrica De Jabon La Corona, S. A. of Mexico City and Industrias, 123, are supplying spray dried synthetic detergents.

Sales manager for Hooker Mexicana, S.A., is Rodolfo Dozano Rocha. He was one of the hosts at the ceremonies marking the inauguration of the new plant. Also present were Thomas E. Moffitt, president of Hooker Chemical Corp.; T. F. Brady and R. C. Toffelmire of Colgate; John Sim and Harold Campbell of Procter & Gamble Co., the U. S. Ambassador to Mexico, Robert C. Hill; Don Eduardo Bustamante, Mexican Secretary of National Patrimony, and other government, industrial, banking and business leaders of Mexico.

New Surfactants Listed...

Fifth revision includes only new or previously unlisted detergents and emulsifiers

By John W. McCutcheon

HE latest revision of the list of surface active agents, which begins on page 55, differs from previous listings in several respects. Only new compounds are included in the fifth revision as it appears in four installments in Soap & Chemical Specialties. The full list of both previously listed surfactants and new ones is available in 127-page booklet form, obtainable from the compiler, John W. McCutcheon, 475 Fifth Ave., New York 17, N. Y.

The current revision, appearing in *Soap*, lists mainly detergents and emulsifiers finding use in chemical specialties. The complete listing in booklet form covers many other types of surfactants, such as food emulsifiers, and surface active agents employed in the manufacture of paints, printing inks, paper, etc.

The format of the fifth revision of the listings is the same as that employed in the 1958 ver-

Talble 1

sion. The method of product classifications and product coverage remains the same as in previous editions. Compounds for industrial use are listed occasionally, principally to indicate the type of manufacturers in the field. This compensates somewhat for companies that maintain simple product identification tags, such as "Compound 21," "Cleaner 999," etc.

Imported products which are available in the United States are listed. Included for the first

		1954	1955	1956	1957	1958	1959
	Esters & ethers, nonsulfonated	42,089	71,819	79,479	~4,310	102, 347	125,682
	Nitrogen containing, nonsulfonated	7,215	10, 083	12,562	12, 439	13, 386	11, 239
3.	Sulfonated and sulfated total	590,918	681,937	0.30, 573	677, 900	730,689	799,992
	Dodecylbenzene type	386, 243	-146, 172	457, 267	554, 695	495,033	1-1-1-1-1
	All others	2,716	3,091	4,784	17,609	100, 410	7, 810
	Lignin derivatives	39,352	79,596	155, 286	164,635	160, 792	200, 41.1
	Naphthalene derivatives	7,332	6,493	7,633	5,719	3, -41	1, 100
	Petroleum aromatics(1)	142,782	124, 548	******	******	******	
	Water soluble	* * * * * *	* * * * * * *	1, 2,19	1, 231	8587	1, 1100
	Orl soluble	82,723	82,750	*****	*****	******	
	Toluene sultonic acid, sodium salt	******	* * * * * * *	7,477	7, 120	2,256	5,089
	Xylene sulfonic acid, sodium salt(2)	******	*****	* * * * * * *		12,715	16, 248
	All others	12, 463	22,037	21, 845	26,791	29, 4	27, 1412
CYCLIC							
1.	Esters and ethers, nonsulfonated	88,478	101, 227	114,200	133,691	166,702	187, 22,
	Nitrogen containing, nonsulfonated	56, 777	65, 353	69,745	78,720	96,733	109,876
3.	Phosphorus-containing, nonsultonated	586	1,852	1,890	1,683	1,685	1,976
4.	Salts, nonsulfonated	21, 129	23,094	10,322	9,905	12, 290	12,754
D.	Sulfated and sulfonated, total	218,644	197,816	200, 235	207, 39%	231, 342	240, 020
	Acids, alcohols and esters(3)	133, 168	140, 482	146, 138	163, 292	197, 459	201, 528
	Nitrogen-containing	8,566	4, 161	5, 731	4, 844	5, 543	21, 7007
	Oils, fats and waxes	76,910	53, 173	48,366	39,262	35, 341	34, 294
	Cyclic	640, 222	763, 839	751,614	774, 355	*46,322	935, 915
	Acvelie	385, 614	389,342	396, 392	431,397	508,752	337,726
	Grand Total,	1, 025, 836	1, 153, 181	1,148,000	1, 265, 955	1,355,074	1, 49.1, 6.19
(1)	Classification changed in 1956,						
(2)	First reported in 1958,						
/95	Includes sulfated and sulfonated ethers in 19	15.					

time in the 1960 listings are a few Canadian firms which are affiliated with American companies, and which have their own manufacturing facilities.

Product specifications are based on information supplied by manufacturers. This information, in some cases, is edited and modified for uniformity of presentation.

Many requests have been made to include prices, but the majority of manufacturers feel that this information would be misleading. It is easy to see how prices might not be accurate in a list published every two or three years. In addition, differences in product specifications all have a bearing on price. Although prices of the products listed generally may be considered as stable, particularly those derived from petroleum, there is a fair amount of fluctuation in the prices of fat derived products. This is particularly true on large contract orders where the margin of profit is small. All of the above factors would require explanatory notes which obviously a tabulated list could not contain.

Products appearing in the 1960 list are from close to 300 manufacturers. The names of about 30 firms have been dropped from the 1958 listing for such reasons as amalgamations, products previously listed are no longer being made, etc. An equivalent number of names of manufacturers has been added. Changes in status of companies, the names of which are listed in the previous revision, are indicated in the 1960 version by means of cross references. Morton-Withers Chemical Co., for example, is now Greensboro Sales Department of Charles Pfizer & Co.; Veriset Corp. appears again as an affiliate of Protean Corp.; Visco Products is now a division of Nalco Chemical Co., etc. Another departure of this year's revision is the inclusion of the page number (s) showing where the products of each manufacturer appear in the listings. These page numbers follow the name of the manufacturer. This is done only in the complete

booklet published by Mr. Mc-Cutcheon. Names of manufacturers whose products are included in the listings published in Soap & Chemical Specialties will appear with the fourth and final installment.

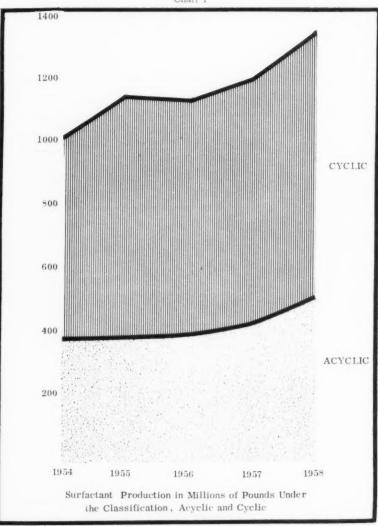
The growth of detergents and emulsifiers continues, as is shown in the data in Table 1, covering the six years of 1954 to 1959 inclusive. Production figures for 1959 show a steep climb, which may be attributed to greater output of acyclic products. Substantial gains were also registered by cyclic compounds, as is shown in Chart 1. The reason for the gain is ascribed to the surge in retail sales of liquid detergents. Lignin type products, after experiencing a sharp rise in output from 1954 through 1956,

seem to have levelled off, due possibly to a production ceiling imposed by a limited supply of raw materials. Use of aromatic type petroleum sulfonates has declined to the point of relative unimportance.

The two most important changes taking place in the field of synthetic detergents in the past several years have been the advent of heavy duty liquid detergents and the appearance of a number of bar form synthetic detergents. Heavy duty liquids undoubtedly will cut sharply into heavy duty powder form detergents. This will tend to bring about a change in the type of detergent base materials used in finished products, rather than cause an increase in overall consumption.

(Turn to Page 114)

Chart 1



Main Uses Form % Conc. Type	bromide Germicide Powder 95% Cationic Germicides and sanitizing agents.	Solid 50%. Liquid 100%. Germicide Powder 100%, Cattonic Germicide for sanitizers, formerly "Cetopyr" C 95%.	Penetrant Liquid 100% Nonionic Lanolin derived liquid plasticizers, penetrant, co-solvent for cosmettes, pharmaceuticals, aerosols.	Sequestrant Liquid Anionic Sequestrant for highly alkaline solutions.	Intermediate Solid 88% Intermediate in manufacture of quaternaries. all Intermediate Liquid 90% Intermediates for production of quaternaries, Available in limited quantities.	ow Antistatic 75% Cationic A textile softening agent.	ry Bactericide 75%	Detergent Wax to 90% Series as follows: (1) Arachidyl-behenyl; (40) hydrogenated tallow amide; (42) stearyl; (57) encyl; (60) coco; (72) oleyl amide. Foam stabilizers, wire drawing lubricarts, etc.	Detergent Paste to 90% Anionic (101) Arachidyl-behenyl amine; (130) vegetable Intermediate Liquid coco; (170) tech. hydrogenated tallow; (160) coco; (170) tech. tallow.	Wetting Liquid 100% Nonionic Asphalt wetting agent.	Emulsifier Solid 100% Anionic High oil solubility; emulsifying agent for emul- Dispersant	Foamer Liquid Nonionic Used to remove water invasion when drilling with air.	Detergent Liquid 100% Anionic Moderately foaming detergent base for alkaline cleaners; has good compatibility with alkaline builders in aqueous solution, good color stability to for causitic soda, and good dedusting properties. Solubilizes less soluble surfactioning and color inated solvents. For use in heavy-duty liquid detergents and in formulations for bottle washing, dairy cleaning, and steam cleaning.	Emulaitier Liquid 100% Anionic Emulaitiers for weed killer esters.	Emulsifier 100% Anionic Emulsifier for chlorinated hydrocarbons.	Westing Liquid 60% Anionic Westing agent for continuous high speed vat
Class and Formula	othyl ammonium othyl ammonium othyl benzylamm	chloride Benzylammonium chloride Benzylammonium chloride Cetyl pyridinium chloride Cetyl pyridinium bromide	Acetylated lanolin alcohols	Modified sequestrant	Secondary latty amine Tertiory fatty amines	Dimethyl dihydrogenated tallow	Dimethyl alkyl turturyl quaternary	Primary latty acids	Primary latty acids		Bis(tridecyl)ester of sodium suffosuccinic acid	Polyoxyethylene alkyl phenol	Free acid of complex organic phosphate ester	Aromatic sulforate-oxide	Aromatic sulfonate-oxide	Sulfonated fatty acid ester
Manufacturer	Aceto Chemical Co.	Aceto Chemical Co.	American Cholesterol Products, Inc.	DuBois Chemicals, Inc.	Archer-Daniels-Midland Co.		Archer-Daniels-Midland Co.	Archer-Daniels-Midland Co.	Archer-Daniels-Midland Co.	Advance Solvents & Chem.	American Cyanamid Co.	Aquaness Dept. of Atlas Powder Co., dist. by Baroid, Magcobar, Wm. Cameron & Co.	General Aniline & Film Corp.	Nopco Chemical Co.		Arnold, Hoffman & Co
Trade Name	Acetoquat CTAB CTAC CDAC	BZA-50 BZA-100 Acetoguat CPC CPB	Acetulan	Activate	Adogen 240 Adogen 362 363	Adogen 442	Adogen 446	Adogen Series 1, 40, 42, 57, 60, 72	Adogen 101 130, 140, 160, 170	Advawet 100	Aerosol TR	Afrox	Agent RE-610	Agrimul N4R	Agrimul TL	Ahcowet 129

Detergents & Emulsifiers				
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Trade Name	Manufacturer	Class and Formula	Main Uses	Form °	% Conc.	Type	Remarks
Ahcowet AF	Arnold, Hoffman & Co.	Pine oil based product	Penetrant	Liquid	100%	Nonionic	ng agent and penetrant for screen
Ahcowet SDS	Arnold, Hoffman & Co.	Sodium dioctylsulfo succinate	Wetting	Liquid	65%	Anionic	Wetting and rewetting agent, penetrant for a compressive shrinking.
Alfracal 2	Alframine Corp.	Fatty alcohol sulfate	Detengent	Liquid	25%	Anionic	Custom grades available.
Algebon #230	Arkansas Co.	Quaternary ammonium compound	Leveling	Liquid	25%	Cationic	Produces uniform and level dyeings on Orlon with cationic dyes.
Algebon #281		Modified quaternary ammonium compound	Leveling	Liquid	45%	Cationic	Used in dyeing nylon tricot to eliminate Barre marks.
Alipal GB-520	Antara Chemicals, Division General Aniline & Film Corp.	Modified alkyl phosphate ester	Emulsifier Lubricant Softener	Liquid	95%	Anionic	A new type anionic surfactant having unusual a solubility and emulsitying properties. Its dispersibility in mineral oils and ability to emulsify such oils combined with lubricating, softening, and antistatic action, suggest use as textile finishing aid, particularly for wool and esynthetic fibers.
Alipal LO-529	Antara Chemicals, Division General Anline & Film Corp.	Sodium salt of complex organic phosphate ester	Detergent Foaming Corrosion Inhibitor	Liquid	0 88 88	Anionic	Viscous, water-soluble surfactant, soluble in wide variety of polar and nonpolar solvents, compatible with electrolyte solutions. Ingredient for use in formulations of detergent concentrates, especially floor cleaner concentrates. Imparts good hard-surface detergency, moderate foaming, and relardation of rust and corrosion.
Alipal MC-470	Antara Chemicals, Division General Aniline & Film Corp.	Modified alkyl phosphate ester	Emulsifier Lubricant Softener	Liquid	95%	Anionic	Emulsifier for mineral oils. Soluble in mineral oils and aromatic solvents. For textile finishoils and aromatic solvent and as ing as a solfener and antistatic agent and as a constituent of lubricants for synthetic libers.
Alipal PE-510	Antara Chemicals, Division General Aniline & Film Corp.	Free acid of complex organic phosphate ester	Intermediate Lubricant Corrosion Inhibitor	Liquid	1000	Anionic	Reacts with organic amines to form emulsifiers, has good compatibility with inorganic salts. Low foaming, it shows promise as a corrosion inhibitor and lubricant.
Alipal RC-335	Antara Chemicals, Division General Aniline & Film Corp.	Ammonium salt of a sulfate ester of an alkyl phenoxypoly(ethyl-eneoxy)ethanol	Detengent	Liquid	57%	Anionic	Detergent base for liquid dishwashing and fine- labrics defergents
Aliquat 33	General Mills, Inc.	N-fatty trimethyl quaternary ammonium chloride	Softener	Liquid	20%	Cationic	Antistatic agent, textile softener, corrosion in- hibitor. Substantive.
Aliquat 204, 205, 206, 207, 215, 221	General Mills, Inc.	N-fatty dimethyl quaternary ammonium chlorides	Soitener	Liquid	75%	Cationic	Textile and paper softeners. Substantive.
Allo Scour R	Scholler Bros. Inc.	Ethoxylated alkyl phenol	Wetting	Liquid	%06	Nonionic	Textile scouring all fibers, emulsifying and wetting agent.
Allo Sope NS	Scholler Bros. Inc.	Alkyl amido sulfate	Detengent	Powder	84%	Anionic	Textile scouring, light duty detergent for all libers.
Ambidex-O	Carlisle Chemical Works, Inc.	Complex amine salt	Emulsifier	Liquid	100%	Cationic	Surface active agent with pronounced detergency.
Amidox C2 C20 C20 L2 L2 L10 L20	Stepan Chemical Co.	Ethoxylated alkylolamides	Emulsifier Detergent	Liquid to Paste	100%	Nonionic	This series "C" for coconut and "L" for lauric possess some of the properties of both all kanolamide and romionic type. As the amount of ethylene oxide is increased they move from the alkylolamide to the nonionics. Used in shempoos, dish washing detergents, and other products requiring emulsification.

Detergents	2	Emulcifiers		
Detergents	C	Linuismers		

Trade Name	Manufacturer	Class and Formula	Main Uses	Form	% Conc. Type	Type	Remarks
Aminol COR	Finetex Inc.	Alkanolamide coconut oil	Detergent	Liquid	%86	Nonionic	A series of products for use in detergent com-
Aminol CS-11 Aminol CS-12 Aminol HG-CN Aminol HG Concentrate	Finetex Inc.	Coconut fatty acid alkanolamide Coconut fatty acid alkanolamide Alkanolamide-Special Coconut fatty acid alkanolamide- special	Detergent Detergent Detergent Detergent	Liquid Liquid Liquid Liquid	0 0 0 0 0 0 0 0 0 0 0 0	Nonionic Nonionic Nonionic	ergents &
Aminol VR-14	Finetex Inc.	Lauric acid alkanolamide Fatty acid alkanolamide	Detengent Detengent	Liquid	99%	Nonionic Nonionic	x L
Ammonyx 4	Onyx Chemical Corp.	Stearyl dimethyl benzyl ammonium chloride	Conditioner	Paste	25%	Cationic	Creme rins 38.
Ammonyx 781		Alkyl methylisoquinolinium chloride	Germicide	Liquid	20%	Cationic	Biocidal agent for industrial water treatment. Secondary recovery of oil.
Ammonyx 4002		Stearyl dimethyl benzyl ammonium chloride	Conditioner Germicide	Powder	100%	Cationic	Substantive conditioning and anti-static agent in aerosol hair sprays, Emollient and conditioner in lipsticks, Jotions, and tolletries.
Anasep	Peck's Products Co.	Soap plus G-11	Detergent	Liquid	20%	Anionic	A superfatted surgical scrub soap which con- tains 4% hexachlorophene on dry soap basis.
Antarate 9181	Antara Chemicals, Division General Aniline and Film Corp.	Anionic-nonionic blend	Emulsifier	Liquid	%06	Anionic	Oil-soluble emulsifier for agricultural toxicants, particularly suitable for Chloro-IPC. Produces emulsions of good spontaneity and stability.
Antarate 9183		Anionic-nonionic blend	Emulsifier	Liquid	82%	Anionic	Oil-soluble emulatifiers for pesticides, such as DDT, BHC, lindane, and toxaphene. Especially useful in medium to hard water.
Apexomine 251	Apex Chemical Co.	Polyoxyethylene compound	Detergent Wetting	Liquid	40%	Nonionic	General purpose detergent and wetting agent. Can be used cold.
Aquasperse 30	Borden Chemical Co.	A casein derived product	Dispersant Wetting	Liquid	15%	Nonionic	Designed for use with latex paints
Arctic Syntex 036	Colgate-Palmolive Co.	Polyoxyethylated nonylphenol	Detergent Wetting Emulsifier Dispersant	Liquid	100%	Nonionic	Textiles, agriculture, dairy, leather, paper, com- pounding
Arctic Syntex L		A cocomonoglyceride sulfate	Detengent	Bead	31%	Anionic	Rug cleaning, laundry, dishwashing, etc.
Arkolene GN	Arkansas Co.	Ammonium alkylaryl sulfonate	Wetting	Liquid	35%	Anionic	Textiles useful in carbonizing wool, etc., resistant to strong acids.
Arlacel 165	Allas Powder Co.	Glycerol monostearate (acid-stable self-emulsifying)	Emulsifier	Solid	100%	Nonionic	Soap-free, completely nonionic product for use in cosmetics and allied fields.
Arlacel 169	Ailas Powder Co.	Glycerol monosterate (non-self- emulsifying)	Emulsiner	Solid	100%	Nonionic	High-purity cosmetic specially. High "mono" content (61-66%).
Arlacel A	Atlas Powder Co.	Mannide monooleate	Emulsifier	Liquid	100%	Nonionic	For use in W/O emulsified vaccines.
Armac CD50	Armour & Co.	Acetic acid salts of distilled n-coconut fatty acid anine. (RNHs)+(CH ₂ C-O)-	Emulsifier Bactericide	Solid to Liquid	100%	Cationic	Flotation agent, corrosion inhibitors.
Armeen DM12D DM14D DMHTD N-coco- Morpho- line	Armour & Co.	Tertiary amines (n-alkyl dimethyl amines)	Detergent Intermediate	Liquid	100%	Cationic	For corrosion inhibitors, flotation agents, quaternary synthesis, polyurethane catalysts, etc.

Manutacturer		Main Uses		11		
Burkhart-Schier Chemical Co	Co. Amine salt of an alkyl aryl sulfonate	Detengent Wetting Dispersant	Liquid	209	Anionic	General purpose textile wetter and detergent of for acid, neutral and alkaline baths.
Аттоиг & Со.	n-Alkyl trimethyl ammonium chlorides	Emulsifier Bactericide Softener	Liquid	30%	Cationic	Sanitizing agents, corrosion inhibitors, textile softeners, antistatic agents; second # indicates approximate concentration.
Metro-Atlantic, Inc.	Fatty acid amine condensate	Detergent Wetting	Liquid	95%	Nonionic	
Metro-Atlantic, Inc.	Nonionic mixture	Emulsiner	Liquid	96	Nonionic	Textile and insecticide emulsifier for use with solvent naphtha and other solvents.
Atlas Powder Co.	N-cetyl-N-ethyl morpholinium etho- sulfate (35% aqueous solution)	Antistatic	Liquid	35%	Cationic	Textile specialty. Water soluble.
Atlas Powder Co.	N-cetyl-N-ethyl morpholinium etho- sulfate (35%, aqueous solution)	Bactericide	Liquid	35%	Cationic	Cosmettic specialty.
Atlas Powder Co.	Glycerol sorbitan laurate Sorbide dioleate	Emulsifier	Liquid	100%	Nonionic	Lipophilic general-purpose emulsifier. Extremely lipophilic general-purpose emulsifier. Insoluble but dispersible in water.
Atlas Powder Co.	Polyoxyethylene sorbitol hexaoleate	Emulsifier	Liquid	100%	Nonionic	General-purpose emulsifier. Soluble in most oils and organic solvents.
Atlas Powder Co.	Polyoxyethylene sorbitol septaoleate	Emulsifier	Liquid	100%	Nonionic	Soluble in most oils and organic solvents. General-purpose emulsifier.
Atlas Powder Co.	Polyoxyethylene sorbitol hexaoleate	Emulsifier	Liquid	100%	Nonionic	General-purpose emulsifier. Soluble in most oils and organic solvents. Higher ethylene oxide mole ratio then in G-1086.
Atlas Powder Co.	Polyoxyethylene sorbitol oleate laurate	Emulsiher	Liquid	%001	Nonionic	General-purpose emulsitier. Soluble in most oils and organic solvents. Dispersible in water and dilute acid or alkaline solutions.
Atlas Powder Co.	Polyoxyethylene sorbitol esters of mixed letty and resin acids	Emulsifier	Liquid	0%001	Nonionic	
	Polyoxyethylene sorbitol esters of mixed letty and resin acids	Emulsifier	Liquid	100%	Nonionic	General purpose.
Atlas Powder Co.	Polyoxyethylene fatty glyceride	Emulsifier	Liquid	%06	Nonionic	
Atlas Powder Co.	Blend of polyhydric alcohol fatty esters	Lubricant	Solid	100%	Nonionic	Cellulosic and acrylic carpet fiber fill static agent.
	Blend of nonionic esters	Lubricant	Solid	100%	Nonionic	Same textile applications as as a knitting lubricant. A
	Polyoxyethylene lanolin derivative	Emulsifier	Solid	100%	Nonionic	For cosmetic for in appearance
Atlas Powder Co.	Polyoxyethylene esters of mixed	Detergent	Liquid	100%	Nonionic	For formulating w
	Blend of sorbitan monostearate and polyethylene stearate	Emulsifier		100%	Nonionic	General purpose,
Atlas Powder Co.	Polyoxyethylene palmitate Polyoxyethylene fatty amine combined with polyoxyethylene sorbitol oleate	Emulsifier d Emulsifier e Detergent	Solid	0001	Nonionic Cationic and Nonionic	General purpose, hydrophilic type. Detergent specialty.
Atlas Powder Co.	Sorbitan monooleate combined with polyoxyethylene esters of mixed	Detergent	Liquid	100%	Nonionic	5 Detergent specialty.

Trade Name	Manufacturer	Class and Formula	Main Uses	Form	% Conc.	Type	Remarks
	Atlas Powder Co.	Polyoxyethylene sorbitol tallow derivative	Lubricant	Liquid		Nonionic	Finish for rayon staple.
	Atlas Powder Co. Atlas Powder Co.	Alkyl aryl sulfonate Alkyl aryl sulfonate blended with polyoxyethylene sorbitan esters of mixed latty and resin acids.	Emulsifier	Liquid	100%	Anionic and Nonionic	General purpose surfactant.
		Alkyl aryl sulfonate blended with polyoxyethylene sorbitan esters of mixed fatty and resin acids	Emulsifier	Liquid	100%	Anionic and Nonionic	surfactant.
	Atlas Powder Co.	Alkyl aryl sulfonate blended with polyoxyethylene sorbitan esters of latty acids	Emulsifier	Liquid	100%	Anionic and Nonionic	General purpose surfactant.
G-3780A	Atlas Powder Co.	Polyoxyethylene alkyl amine	Antistatic	Liquid	%001	Cationic	Used as a producer finish component in man- ufacturing synthetic fibers. Mildly cationic. Nonionic under alkaline conditioners.
	Atlas Powder Co.	Polyoxyethylene oleyl ether	Emulsifier	Solid	%001	Nonionic	Alkali-stable general purpose emulsifier, widely used in cosmetic formulations.
Atlas G-9046T Atlasal	Aquaness Dept. of Atlas Powder Co., dist. by Wm. Cameron & Co. and Milwhite and Superbar	Polyoxyethylene sorbitan monolaurate Polyoxyethylene mannitan monolaurate Polyoxyethylene sorbitan tall oil ester	Emulsifier Emulsifier	Liquid Liquid Liquid	100%	Nonionic Nonionic Anionic	General purpose, water soluble. General purpose, water soluble. Emulsifier for oil-in-water emulsion drilling muds.
Bionol RO-50	Antara Chemicals, division, General Aniline & Film Corp.	Alkyldimethylbenzylammonium chloride	Bactericide	Liquid	%05	Cationic	Quaternary ammonium bactericide synthesized from a group of alkyl radicals selected to impart high germicidal efficiency and a relatively high tolerance to hard water.
	E. F. Drew & Co., Inc.	Blend of solvents and nonionic emulsifiers	Emulsliffer	Liquid	100%	Anionia	Paint and tar remover on textiles for general use except under acid conditions.
Blancol W Conc.	Antara Chemicals, division, General Aniline & Film Corp.	Sodium salt of a sulfonated naphtha- lene-formaldehyde condensate	Dispersant	Liquid	20%	Anionic	Peptizing agent in insecticide for formulations Also used as a resin dispersant in continuous tall-oil recovery.
Scour N	Scholler Bros. Inc.	Built sodium alkyl aryl sulfonate	Detergent	Powder	%66	Anlonic	Textile scouring, heavy duty detergent for all fibers.
Scour BH		Alkanolamide condensate of coconut fatty acid with pine oil	Detergent	Liquid	26%	Nonionic	Textile detergent, solvent scour for hosiery.
Scour HH	Scholler Bros. Inc.	Built sodium alkyl aryl sulfonate	Detengent	Powder	97%	Anionic	Textile detergent, heavy duty scouring of all fibers, particularly effective in hard water.
Scour NYS	Scholler Bros, Inc.	Blend of nonionic surfactants	Emulsifier Dispersant	Liquid	25%	Nonionic	Textile scouring specialty, graphic remover for lace and hosiery. Detergent
Brosco Silk Fin- ishing Oil R	Scholler Bros. Inc.	Sulfonated fatty acid with chlorinated solvent	Detengent	Liquid	470/2	Anionic	Scouring and softening, recommended for cleaning dye nets.
460 H-50 H-70	Bryton Chemical Co. Bryton Chemical Co.	Synthetic sodium petroleum sulfonate Synthetic sodium petroleum sulfonate	Emulsifier	Liquid	62% 62% 50 70%	Anionic	Drycleaning detergents and textile oils. Used in rust preventive formulations and as a peptizer for fuel oils.
Ammonium	Bryton Chemical Co.	Synthetic ammonlum petroleum sul- fonate	Dispersant	Liquid	35%	Anionic	Diluted in kerosene; used in rust preventive formulations for pipe lines and storage tanks.
Barium	Bryton Chemical Co.	Synthetic barium petroleum sulfonate	Dispersant	Liquid	30%	Anionic	Used in rust preventive formulations.

)	Irade Mame	Manufacturer	Class and Formula	M.:. **	1			the state of the s
	Bryton Calcium	Bryton Chemical Co.	Synthetic calcium notrolona aulto-	Main Oses	Form	% Conc.	Type	Remarks
	Calcium 45		denoted in suronate	Dispersant	Liquid	30%	Anionic	Used as a detergent portion of motor oil addi-
	BTC Isopropanol	Onyx Chemical Corp.	Alley dim cohenile	Dispersant	Liquid	40%		
			chloride in isopropanol	Disinfectant Deodorant	Liquid	%05	Cationic	Dairy, restaurant, food processing, industrial
	BTC 50% USP	Onyx Chemical Corp.	Alkyl dimethylbenzyl ammonium chloride	Fungicide Disinfectant Deodorant Germicide	Liquid	%05	Cationic	lisinfectant-sanitizers. Slime mills. Detergent sanitizers. urgical and dental instruurements for USP Rental
	BTC Powder 20%	onyx Chemical Corp.	Alkyl dimethylbenzyl ammonium chloride	Fungicide Disinfectant Deodorant	Powder	20%	Cationic	
	BTC 824 20%	Onyx Chemical Corp.	Aikyl dimethylbenzyl ammonium chloride	Fungicide Disinfectant Deodorant	Powder	20%	Cationic	Powdered sanitizer and disinfectant products.
	BTC 1100	Onyx Chemical Corp.	Alkyl dimethyl naphthyl ammonium chloride	Fungicide Disinfectant Deodorant	Powder	100%	Cationic	
	BTC 2125	Onyx Chemical Corp.	Mixture of BTC-471 and BTC-824	Germicide Fungicide Disinfectant Deodorant Germicide	Liquid	20%	Cationic	Produde.
	Casolene Oil HS	- Singular Resident	,	rungiciae				
	moral andres		Highly sulphonated oil	Wetting Emulsifier	Liquid		Anionic	General wetting and penetrating agent stable to acids, alkalis, Epson salts, hard water and hypochlorite lignore. Furnishing
		- 1	Fatty amino complex	Dotergent	Paste	50%	Anionic	Nachino and the state of the st
S	Carbopol 934	B F. Goodrich Chemical Co.		Emulsifier	Powder		Anionic	An oil amulation and
OA	Carboxane G-3	Textilana Corp.	Fatty amide ethorylate					high viscosity formulations.
P and CE	Carboxane NO Carboxane NW Carboxane TW	Textilana Corp. Textilana Corp.	Alkylphenol ethoxylate Alkylphenol ethoxylate Fatty alcohol ethoxylate Fatty acid ethoxylate	Emulsifier Emulsifier Detergent Foamer	Liquid Liquid Liquid Liquid		Nonionic Nonionic Nonionic	Wetting and penetrating in acid or alkali. Oil soluble detergent. Solubilizer, emulsifier. Emulsifier, foaming detergent, solubilizer.
1E	Catange SN	American Cyanamid Co.	Stearamido propvidi-methyl. B		ridnia		Nonionic	Low foam detergent base, spray oil emulsifier.
MICAL	Catanac SP	can Cyanamid	hydroxy ethyl ammonium nitrate Stearamido propyldi-methyl-B. hydroxy ethyl ammonium phosphate	Antistatic Dispersant Antistatic Dispersant	Liquid	35%	Cationic	Antistatic, rewetting and stripping agent with good solubility and acid and alkali resistance. Antistatic, dispersant, lubricant, rewetting and
. SPECIAL	Cathol	O. L. King & Co.	Fatty amido diamine		Liquid	95%	Cationic	As a corrosion inhibitor, both as the free amine or in the form of the mono and di salts of latty acid polymers. Acetic acid or hydroxy, acetic acid salts are both water and oil soluble in control of
TIL	Cation Softener X	Onvx Cheminal Court						water, non metallic mineral flotation and as textile softener.
			Alkyl imidazoline derivative	Softener	Paste	33%	Cationic	Glass fiber mordant and lubricant

Trade Name	Manufacturer	Class and Formula	Main Uses	Form	% Conc.	Type	Remarks
Centrol 1F 1P 2F 2P 3F 3P 5F	Central Soya Co.	Natural lecithin	Emulsifier Dispersant	Paste	72%	Ampho- teric	Oil soluble, w/o emulsifier and dispersant for pigments.
Centrolene N NS S	Central Soya Co.	Treated Lecithin (US Pa. 2,629,662)	Emulsifier Dispersant Wetting	Paste	* %09	Nonionic	Emulsitiers of the W/O type designed for use at lower. pH values. Formerly named "Gliddene". "S".—mold release.
Centrolex C. F. O. P.	Central Soya Co.	Oil-free lecithin	Emulsifier Wetting Dispersant	Granular	*%56	Nonionic	ins where oil-free
Centromix B M BL, LP P, WP	Central Soya Co.	Compounded emulsifier	Dispersant Wetting Emulsifier	Paste Liquid	62%*	Nonionic	Products modified for specific application.
Centrophil C P	Contral Soya Co.	Refined lecithin in suitable carriers such as coco butter, Carbitol, etc.	Emulsifier Dispersant	Solid	77%,*	Ampho- teric	A wide spectrum of properties including both O/W and W/O type emulsifiers. Formerly mamed "Gliddophil." %active represents "acetone insoluble."
Centrophil L E SH	Central Soya Co.			Paste			
Centrophil SG IM IL	Central Soya Co.			Liquid			
Ceranine HCA	Sandoz, Inc.	A fatty amide derivative	Softener	Preto		Cationic	A textile softening agent. This product eliminates the formation of Rosaniline in the finishing bath.
Ceraphyl 28 31 50	Van Dyke & Co.	Cetyl lactate Lauryl lactate Myristyl lactate	Emollient	Solid Liquid Solid	%%%	Nonionic Nonionic Nonionic	To improve feel and texture of wide variety of cosmetic and pharmaceutical preparations.
	Van Dyke & Co.	Diethylene glycol	Emulsifier	Solid	100%	Nonionic	for
Cerasynt Special	Van Dyke & Co.	Monostearates Stearic ester-amide	Emulsitier	Solid Flake	100%	Nonionic	Cerasynt is self-emulsitying. Thickener and opacifier for shamboos.
Cerasynt PA	Dyke &	Propylene glycol monostearates	Emulsifier	Solid	100%	Nonionic	
Cerasynt WM 100 D	Van Dyke & Co.	Glycerol monostearates	Emulsifier	Flake	100%	Nonionic	Emulsitiers for cosmetics and pharmaceuticals, acid-stabilized.
Cerasynt 303 Cerasynt 218, 616. 634, 630. FD	Van Dyke & Co.	Hydroxyethyl stearamide Polyoxyethylene mono and distearates	Emulsifier Emulsifier	Liquid	100%	Nonionic	Emulsifying, wetting and dispersing agent. Emulsifiers, opacifiers and conditioners for cosmetic and pharmaceutical use.
Cetab	Fine Organics, Inc.	Cetyl trimethyl ammonium bromide	Germicide	Powder	%001	Cattonic	A sanitizing agent.
Cheelox BF-12	Antara Chemicals, division General Aniline & Film Corp.	Tetrasodium ethylenediamine tetra-acetate	Sequestrant	Liquid	25%	Anionic	Sequestering agent for calcium, magnesium end other metal ions usually found in hard water. Leather and textile processing.
Cheelox BF-13	Antara Chemicals, division General Aniline & Film Corp.	Tetrasodium ethylenediamine tetra-acetate	Stabilizer Stabilizer	Liquid	36%	Anionic	Sequestering agent for calcium, magnesium and other metal ions usually found in hard water. Inactivates metal ions that interfere with wet processing in textile, leather, and paper industries. Used in liquid soaps and shampoos, soaker-alkall cleaners, cationic sanitizers, detergent-sanitizers, etc. Stabilizer for rubber lattices to prevent decomposition, premature coagulation, and sludge formation. In viscose rayon manufacture, to remove lead and zinc by washing before desulfurization. Stabilizes peroxide bleach liquors.

Trade Name	Manufacturer	Class and Formula	Main Uses	Form %	% Conc.	Type	Remarks
Cheelox BF-78	Antara Chemicals, division General Aniline & Film Corp.	Tetrasodium ethylenediamine tetra-acetate	Sequestrant	Flakes	78%	Anionic	Concentrated, nonhygroscopic, nondusting flake form for use in all sequestering applications where a solid material is preferred.
Chel 300 Chel 600	Geigy Chemical Corp. Geigy Chemical Corp.	Nitrilotriacetic acid 1, 2 Diaminocyclohexane tetra- acetic acid	Sequestrant Sequestrant	Powder	,%001 100%	Anionic	Complexing agent for transitional metals. Strong complexing agent for common and rare earth metals. The tetrasodium salt has a solubility in water of 50%. The alkyl amine salts are soluble in kerosene.
Chel DP	Geigy Chemical Corp.	Di (o-hydroxyphenyl) acetic acid	Sequestrant	Powder	100%	Anionic	
Chel ME		Diaminoethylether tetraacetic acid	Sequestrant	Powder	100%	Anionic	Complexing agent, good solubility in water in acid form (3.2%).
Chel DE	Geigy Chemical Corp.	Eethylene-glycol bis(aminoethylether) tetraacetic acid	Sequestrant	Powder	100%	Anionic	Selectively complexes calcium in presence of magnesium.
Chemactant PFC	Chemactants Inc.	Barium lanolate	Dispersant	Powder	100%	Nonionic	Pigment dispersants, anti-settling agent for non-aqueous systems, anti-corrosive, protective hydrophobic for textiles, lubricants, paints, etc.
Cholesterol	American Cholesterol Products, Inc.	Lanolin derivative	Emulsifier Softener	Crystal	100%	Nonionic	Lanolin derived w/o emulsifier, auxiliary tex- tile softener, pharmaceuticals, and cosmetics.
Coleo	Colgate-Palmolive Co.	Compounded alkyl aryl sulfonate	Detergent Wetting	Powder		Anionic	Manual laboratory glassware and surgical instrument cleaner.
Comperlan 100	Fallek Products Co.	Coco fatty acid monoethanolamide	Foam	Flakes	92-	Nonionic	Foam stabilizers and thickening agents for
Comperlan LM	Fallek Products Co.	Lauric acid monoethanolamide	Foam	Flakes	92-	Nonionic	
LP		Lauric acid isopropanolamide	IaZIIIGBIG	Solid	98-	Nonionic	shampoos and other detergents.
KD		Coco fatty acid diethanolamide		Liquid	85-	Nonionic	
LD Comperlan PD	Fallek Products Co.	Lauric acid diethanolamide Coco latty acid polydiethanolamide	Foam Stabilizer	Solid	90% 90% 80°	Nonionic	Foam stabilizers for shampoos and dish washing agents.
Conco AAS-40-P	Continental Chemical Co.	Sodium alkyl aryl sulfonate	Detergent	Powder	40%	Anionic	Household detergents, laundry cleaning com-
Conco AAS-40-G Conco AAS-40-F Conco ATR-40	Continental Chemical Co.	Sodium alkyl aryl sullonate Sodium alkyl aryl sullonate Ammonium tridecyl benzene sullonate	Detergent Detergent	Granules Flakes Liquid	40% 40% 40%	Anionic Anionic Anionic	Industrial detergents, textile processing. Consumer detergents, laundry products. For light and heavy duty liquid detergents where increased solubility is required.
Conco AAS- Special		Amine salt of an alkyl aryl sulfonate	Emulsifier Solubilizer	Liquid	92%	Anionic	For liquid systems where kerosene, "Varsol," and naphtha is to be emulsified: emulsion degreesers, metal cleaning.
Conco AAS-90-P AAS-90-G	Continental Chemical Co.	Sodium alkyl aryl sulfonate	Detergent Detergent	Powder	%06	Anionic	Consumer and industrial compounds where high active is required. Primarily designed for powdered dishwashing and laundry detergents.
Conco AAS-90-F	Continental Chemical Co.	Sodium alkyl aryl sulfonate	Detergent	Flakes	%06	Anionic	Primarily for dishwashing and laundry detergents.
Conco Emulsifier K		Basically, coconut diethanolamide	Emulsifier	Liquid	%001	Nonionic	An emulsifier for "Varsol," naphtha toluol, xylol; forms stable solutions with 95 parts solvent to 5 parts emulsifier.

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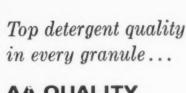
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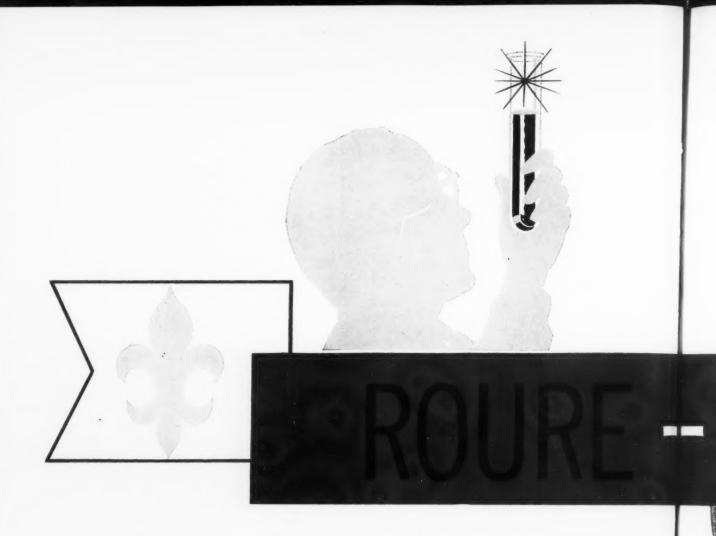
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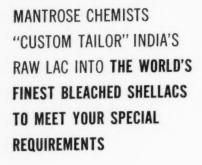
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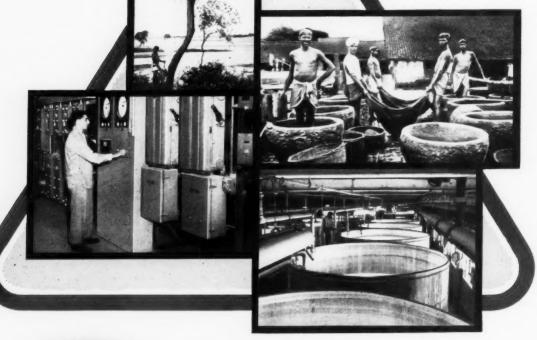
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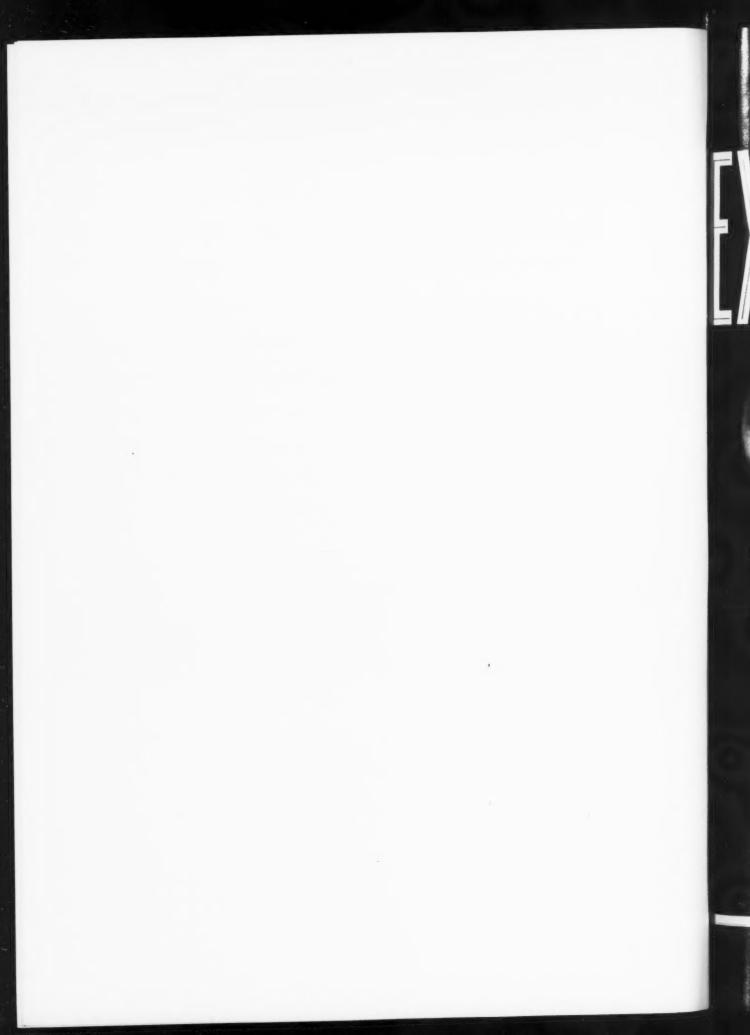
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TX-1 is a hard, high-melting emulsifiable resin-like wax, light brown in color, translucent in appearance.

TS-254 is a hard, medium-melting, cream-colored wax.

ATTENTION AEROSOL FORMULATORS: These waxes form true solutions in many organic liquids thus greatly simplifying aerosol formulation problems. No settling in the can! No clumps to block the orifice!

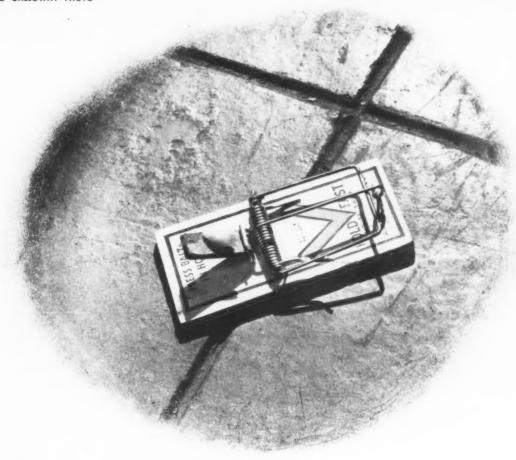
The oxazoline structure is unique among waxes, both natural and synthetic. From it comes high adhesion, good wetting on hard surfaces and good lubricity. These waxes are compatible with most natural and synthetic waxes. Stable gels or pastes are formed when they are dissolved in high concentrations in many organic liquids.

Because of these properties, TX-1 and TS-254 are expected to be useful in self-polishing floor waxes, paste polishes, leather, paper, and textile finishes, synthetic lubricants, metalworking lubricants, cosmetics, as mar-proofing agents in enamels, and as pigment grinding assistants.

There are four other oxazoline waxes also available. Let us discuss your specific problem and provide you with samples. Write on your letterhead to Market Development Department, Commercial Solvents Corporation, 260 Madison Avenue, New York 16, New York.

PHYSICAL PROPERTIES	TS-254	TX-1	ES-254	TS-254A	TS-254AA	15-970
Melting point °C	63	160	37	50	93	74
Volume Expansion on melting—%	7.7		8.9	9.2	9.2	9.
Penetration, ms/100 gm load (ASTM D5-25)	0.2		1.3	0.3	0.4	0.1
Acid No. (approx.)	7'	12	9	2	1-2	6
Solubility, % by wt. in:						
Butanol	7	49	50	22	13	4
Toluene	16	52	49	16	7	16
Carbon Tetrachloride	16	47	49	gel	14	gel
Stoddard Solvent	12	52	49	17	4	5
Butyl Acetate	11	55	49	13	9	6
Methyl Isobutyl Ketone	10	ins.	49	10	8	5
Turpentine	21	10	24	21	10	10

COMMERCIAL SOLVENTS CORPORATION



our traps are

How to trap a consumer. Pretty package? Magic ingredients? Good price? Well... these things all play a part. But Perry proves it's the *atmosphere*... the *fragrance*... that surrounds a product that makes the *big* difference. Here, basically, rests the solution to lagging sales of many products.

This lack of atmosphere around your product might well be your product-ill. Only a reputable expert can diagnose it correctly and find a scientific cure. Devoted to this end are the experts and the truly remarkable research facilities at Perry. Both are at your disposal.

We welcome the opportunity to submit appropriate samples.



PERRY BROS., INC. 61-14 32nd Ave., WOODSIDE 77, NEW YORK

"Perfection through Research"

"Kiddie-Kare"

(BUG PROOF THE YOUNGSTERS)



In these days of patios, pools and back yard barbecues there's plenty of opportunity for insects and kids to get together.

The personal repellents (both pressurized and liquid) made with MGK formulas not only do an excellent job of keeping mosquitoes, ticks, chiggers, flies, especially biting flies off adults, but they are perfectly safe to apply on children, whether they be tiny toddlers or tall teenagers.

*MGK formulas are available in ready-to-pack or in concentrate forms. Ready-to-pack formulas may be used as liquids or in pressurized sprays. With the concentrate, you mix your own solvents before packing.



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Gentlemen: Please send information on the formulating, labeling, packaging, and marketing of personal repellents. NAME Address City State

Canadian Specialties Meeting

Canadian Manufacturers of Chemical Specialties Assn. holding third annual meeting in Montreal. Canadian DuPont president to speak on selling.

WIDE ranging program of subjects is scheduled for discussion at the third annual meeting of the Canadian Manufacturers of Chemical Specialties Assn., being held Monday, Tuesday and Wednesday, Oct. 24-26, at the Queen Elizabeth Hotel, Montreal. Slated for discussion are such varied topics as tariffs, selling, specifications, developments in bacteria control, non-aqueous foam aerosols, properties and performance characteristics of detergent alkylates, iodine in food products sanitation, etc.

The three day meeting opens with a meeting of the board of directors of CMCS Monday,

Oct. 24. Divisional meetings to discuss programs for the coming year are scheduled for the afternoon of Oct. 24. The six divisions of which CMCS is composed are Aerosols, Automotives, Disinfectants and Sanitizers, Pesticides, Soaps and Detergents, and Waxes and Floor Finishes. A reception beginning at 8:00 p.m. in the association's hospitality suite concludes the day's events.

The meeting formally opens Tuesday morning, Oct. 25, when the annual meeting is held at 9:30. During the course of this meeting officers and directors will be nominated and elected for the coming year. CMCS' program for 1961 will be outlined at this session by the newly elected president. Geoffrey H. Wood, president and founder of G. H. Wood & Co., Ltd., Toronto, is currently president of the Canadian Manufacturers of Chemical Specialties Assn.

A panel discussion of tariffs at 10:30 a.m., Oct. 25, follows the annual meeting. J. A. Davis, Du-Pont of Canada, Ltd., Montreal, chairman of the Chemical Industry Tariff Committee and L. C. Audette, chairman of the Tariff Board will discuss proposed revisions in Canada's tariff regulations. Moderator of the panel will be A. Robins, Cartier Chemical Co., Lachine, Que. Mr. Robins is secre-

G. H. Wood, President



R. L. Jones,



A. H. Carter, Vice-president



OCTOBER, 1960



A. Robins, Secretary



George V. Jensen.
Director



Gordon Lang. Treasurer

tary of CMCS. A question and answer session will follow the tariff panel.

The luncheon speaker, Oct. 25, will be Herbert H. Lank, president of DuPont of Canada, Ltd. Mr. Lank will discuss "Selling in the Sixties."

Two divisional meetings, held concurrently, get under way immediately following lunch, Oct. 25. The Pesticides Division will feature a forum participated in by W. S. McLeod, C. V. Marshall, and E. O. Hughes. Mr. McLeod is supervisor, Pesticide Unit, Feed, Fertilizer and Pesticide Section, Plant Products Division, Canada

Harold G. Lederer, Director



Department of Agriculture. Also with the Canada Department of Agriculture is C. V. Marshall, who is superintendent of laboratories, Plant Products Division. Mr. Hughes is public relations officer of the National Research Council. Chairman of this session will be R. T. Howard, A. T. Howard Chemical Co., Orangeville, a director of CMCS.

Two papers are scheduled to be presented during the Waxes and Floor Finishes Division session which also starts at 2:15 p.m., Oct. 25. Richard Zdanowski of the research laboratories of Rohm & Haas Co., Philadelphia, will speak on "Filming Technology of Emulsion Polymers." The second paper of the session entitled, "Specifications and How They Are Handled," will be presented by D. Wolochow, secretary, Canadian Government Specifications Board. Chairman of this session is Robert S. Sweet of Success Wax, Ltd., Quebec, a director of CMCS.

Three other divisions of CMCS meet at 3:45 p.m., Oct. 25. At that time the Aerosol Division is scheduled to hear a paper on "Non-Aqueous Foam Aerosols," by Dr. Paul A. Sanders of E. I. du Pont de Nemours & Co., Wilmington, Del. Concurrently there will be a joint meeting of the Soaps

and Detergents Division and the Disinfectant and Sanitizers Division. Dr. A. F. McKay, research director of Monsanto Canada, Ltd., Montreal, will discuss "Present and Future Developments in the Control of Bacteria." Co-chairman of this session are to be R. L. Jones of Colgate-Palmolive, Ltd., Toronto, CMCS vice - president, and Geoffrey H. Wood, G. H. Wood & Co., Toronto, CMCS president. Carl Durant, Aerocide Dispensers, Ltd., Scarborough, and D. S. Lee, DuPont of Canada, Ltd., Montreal, are co-chairmen of the Aerosol Division meeting.

The final day of the meeting opens with a panel on market-

Robert S. Sweet Director





Herbert H. Lank,
"Selling in Sixt es"



Dr. W. W. Stewart,
"... Detergent Alkylates"



Dr. A. F. McFay.
". . . Bacteria Control"

nag, scheduled for 10:00 a.m. Speakers will be announced at the meeting.

Luncheon speaker, Wednesday, Oct. 26, will be Lieut. General G. G. Simonds, president of Toronto Brick Co., and former Chief of the Canadian General Staff.

Four divisional meetings are scheduled for Wednesday afternoon. Meeting jointly at 2:15 p.m. will be the Soaps and Detergents Division and the Disinfectants and Sanitizers Division. Concurrently, the Aerosol Division will hold its second session.

Two papers are scheduled for presentation at the joint meeting. Dr. W. W. Stewart, manager, development division, Chemical Products Department, Imperial Oil, Ltd., will speak on "The Properties and Performance Characteristics of Detergent Alkylates." A discussion of "The Role of Iodine in Food Products Sanitation" will be presented by Dr. John Wilson, senior vice-president and director of research for Economics Laboratory, Inc., St. Paul. Messrs. Wood and Jones are cochairmen for the joint session.

The final feature of the meeting will be a joint meeting of

the Waxes and Floor Finishes Division and the Automotives Division, Wednesday afternoon, Oct. 26, at 3:45 p.m. The speaker, Stanley W. Coryell, manager of technical services of R. M. Hollingshead Corp., Camden, N. J., will present a paper entitled, "Technical Sales Service."

Following the cocktail party scheduled for 6:00 p.m., the banquet will get under way at 8:00 p.m. The guest speaker will be The Hon. Pierre Sevigny, Associate Minister of National Defense. At the conclusion of his address there will be a floor show, followed by dancing.

Stanley W. Coryell.
"Technical Sales Service"



Dr. John L. Wilson.

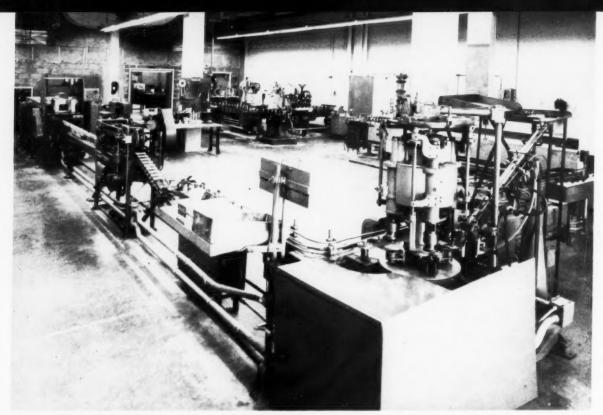
"Iodine in Food Sanitation"



David Wolochow,



OCTOBER, 1960



Overall view of the aerosol filling line in plant of Mennen Co., limorristown, N. J. Empty cans enter at one end of "U" shaped a

line, and emerge filled and in cartons ready for shipment at other end.

Mennen's Aerosol Plant

LTHOUGH Mennen Co., Morristown, N. J., has been marketing an aerosol shave cream ("Foam Shave") since 1952, and has added other pressure packaged shave products since then, it is safe to say that there will be many other aerosols in the future at Mennen. Not only does this 52 year old manufacturer and marketer of toiletries for men and baby preparations have the marketing know-how, but the last word in production facilities for aerosol products. It is the latter phase of the highly successful Mennen operation with which we are concerned.

Occupying an area of 3,000 square feet (30' x 100') in the new wing of the seven year old Mennen plant is a high-speed, "U" shaped aerosol production line. Empty cans are unloaded by equipment made by Mennen at one end of "U" and emerge filled, cluster-

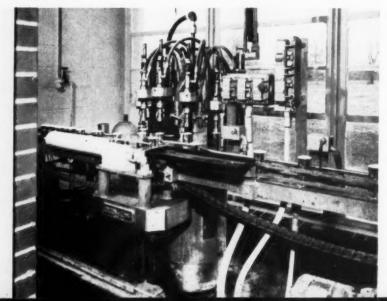
packed and cartoned at the other end. The aerosol loading room, like all other filling areas in the tremendous Mennen plant, is bright and spotlessly clean.

The Mennen line, which has been operating at a production

speed of 120 units per minute, is manned, under normal conditions by 14 operators. Speaking of speed, it is the aim and objective at the plant to boost output to 180 cans per minute.

From can unloading equip-

Close up of separate room where butane gassing is carried on. Note windowed wall which was installed as a safety factor. Leak detection devices are also used in gassing areas.



Top right: Operator installs valve assembly on cans on way to seamer and crimper. Finished product inspection is shown in center photo. Bottom photo shows cluster-packs of shave cream being inserted in cases.

ment, which is located outside the actual filling or production room, containers pass along the line through a doorway into the loading area. Here filling of ingredient is done by one of two Elgin Mfg. Co. units. Propellant is added by Alpha-Colton Co. equipment. If butane is employed as the propellant the cans pass through another doorway into a small separate room that juts out from the rest of the building. One wall of the butane filling room is all windows, which face a very large area of lawn. Mine Safety Devices gas detection equipment is installed in the propellant loading area, Should excessive gas accumulate, all equipment ahead of the operation is automatically shut down until the hazard condition has been corrected.

The production line is designed to by-pass the butane filling room fer products that do not require this gas as a propellant.

Prior to immersion in the Island Equipment Co. water bath test tank, valves are inserted and crimped to cans by Alpha-Colton equipment. A can dryer made by Worthington Pump Corp. is located at the end of the water bath. From here, cans pass through a can labeling machine and a carrier band wrapper, both by Standard-Knapp. Cluster packs are fed into cartons sealed by L. J. Ferguson case sealers. Other equipment on the Mennen lines includes American Can Co, crimpers and an adaptor machine supplied by Pneumatic Scale Corp.

Cases of finished product go into storage, or, in the case of a new product such as "Sof' Stroke," a heavy bodied aerated shave cream introduced earlier this year, may be fork lifted on pallets to waiting motor trucks or railroad freight cars.







Nonionic Emulsions of

ATER-emulsion floor polishes used to be commonly based on combinations of anionic wax emulsions and dispersions of natural and synthetic resins. While these products provided high gloss, slip resistance, durability and resistance to water spotting, they had the disadvantage of being dark in color. Such dark-colored polishes tend to produce color build-up on floors when repeatedly applied without proper removal between applications.

With the present trend to light-colored floor coverings, initial color and color build-up have become of prime importance to the polish manufacturer. Many ingredients present in floor polish formulations may contribute to color formation. However, this discussion will be limited to the wax emulsion and possible methods of eliminating color in that portion of the polish.

Selection of Surfactants

In the preparation of anionic wax emulsions the emulsifier system usually consists of a high-molecular-weight unsaturated acid and an amine. When these materials react to form the amine soap, considerable darkening of the product occurs. While not too apparent with a highly colored natural wax, this darkening becomes very obvious with the light-colored synthetic emulsifiable waxes, such as polyethylene.

During recent years emulsion technologists have found very light-colored polyethylene wax emulsions can be made by the use By M. O. Brunson* and L. D. Queen

Eastman Chemical Products, Inc.

Kingsport, Tenn.

of nonionic surfactants. Reluctance on the part of many polish manufacturers to investigate this possibility can probably be explained by the fact that nonionics are usually associated with water solubility and thus are assumed to have poor resistance to water spotting. This is not necessarily true. Many nonionic surfactants are oil-soluble and show little or no solubility in water. Nonionic polyethylene wax emulsions of interest to the manufacturer of light-colored floor polishes are based on nonionic surfactants of very low solubility in water.

HLB System

Since a large number of nonionic surfactants are commercially available, some method had to be used in selecting the system suitable for a given polyethylene wax. The old trial and error method could not be employed because of the almost infinite number of possibilities. The HLB system devised by Atlas Powder Co. was used to determine the correct blend of surfactants required to give suitable emulsions of the Eastman emulsifiable polyethylene wax, "Epolene E."+ (A complete explanation of the HLB system is available from Atlas Powder Co.) **

The HLB system, so called from the hydrophile-lipophile bal-

ance, is based on the assumption that all surface active agents exhibit a certain balance between the hydrophilic (water-loving) and the lipophilic (oil-loving) portion of their molecular structure. With this in mind, certain numbers have been assigned to the surfactants to indicate this balance. These numbers are not just empirical values but are calculated on the basis of molecular structure. Once the HLB required to emulsify the material in question is determined, only those surfactants or blends of surfactants need be evaluated that have this HLB rating. It also makes possible a positive method of blending two or more surfactants to get a desired HLB.

In determining the required HLB for our emulsifiable polyethylene base, blends of surfactants were prepared to give HLB values of 5 to 16 in increments of 1. This HLB range was chosen as a result of previous work by Atlas Powder indicating that most waxes require HLBs in this range. Attempts were made to emulsify the wax with each of these surfactant blends. The blend with an HLB of 9 was found to give the best results. Blends of surfactants were then prepared in the range of 8.5 to 9.5 in increments of 0.1. The blend having an HLB of 9.2 gave the best results when observed on the Parr turbidimeter. This value, 9.2, was considered therefore to be the required HLB for "Epolene E." It should be pointed out that this HLB value may not be optimum

t"Epolene E" is a registered tradename of Eastman Kodak Co. for emulsifiable polyethylene wax.

^{**}A Guide to Formulation of Industrial Emulsions with Atlas Surfactants," Atlas Powder Co., Wilmington, Delaware, 1955.

^{*}Paper presented at 46th midyear meeting, Chemical Specialties Manufacturers Association, Chicago, May 18, 1960.

Polyethylene Wax

for all emulsifiable polyethylene waxes. It applies only to "Epolene E."

Choice of Emulsifiers

Emulsifiers for nonionic emulsions intended for use in floor polishes should be selected for very low water solubility. In general, emulsifiers having an HLB below 11.5 give best results when blended to an HLB of 9.2. Although materials with higher HLB values may be blended to the desired HLB of 9.2 and still produce good emulsions of "Epolene E," these emulsions have very poor resistance to water spotting. For example, if the surfactant prepared from 9 to 10 moles of ethylene oxide on nonyl phenol (which has an HLB of 13) is blended with a material of low HLB to obtain a final HLB of 9.2. the resulting emulsion will exhibit very poor water resistance.

Factors in Emulsification

Emulsions prepared at first were not satisfactory for floor polish applications because emulsion particle size was too large to give a dry, bright gloss. Additional experimentation yielded methods of improving these emulsions. Results of these studies indicated that the following factors influenced emulsification:

 A blend of emulsifiers is usually better than a single emulsifier.

- 2. Surfactants of the type prepared by condensation of ethylene oxide on nonyl phenol, octyl phenol, tridecyl alcohol, or lauryl alcohol have been found to give best results in the preparation of nonionic emulsions of "Epolene E."
- 3. Since many of the above surfactants have an HLB higher than 9, a material of low HLB must be used in blending to the final HLB of 9.2 Of the wide range of products evaluated for this purpose, the best results were obtained with sorbitan trioleate. (Commercially available from Atlas Powder Co. as "Span 85.")
- 4. In addition to the surfactant, a small amount of alkali, alkali salt, or amine salt is necessary for emulsification of polyethylene waxes. Potassium hydroxide is found to give the best over-all properties. However, certain other salts such as trisodium phosphate and borax are also satisfactory.

Based on these factors we suggest the following formula for a nonionic "Epolene E" emulsion for floor polish application:

Nonionic Emulsion for Floor Polish Material Parts by Weight "Epolene E" 40

"Epolene E"	40
Surfactant blend	
(HLB=9.2)	12
50% KOH solution	1.2
Water	150

Suitable nonionic surfactants system and pressure method of processing can produce, on a fairly consistent basis, satisfactory wax emulsions of low color Two methods are suitable for preparation of nonionic emulsions of polyethylene waxes. The first is the standard wax-to-water method which is presently being used by many polish manufacturers. Using the following formula for an emulsion, we shall review briefly this procedure:

Typical	Formulation

Material	Parts by Weight
"Epolene E"	40
"Brij 30" surfactant	
(Atlas Powder)	11.2
"Span 85" surfactant	
(Atlas Powder)	0.8
50% KOH solution	1.2
Water	150

Emulsification is carried out as follows:

Step 1. "Epolene E" is melted in a container of suitable size and allowed to cool to 115-120° C. (239-248° F.) Melt temperature should not exceed 150°C. (302°F.).

Step 2. The blended surfactants are added to the "Epolene E" melt and thoroughly mixed until the melt is uniform in appearance.

Step 3. The 50% KOH solution is slowly added to the wax-surfactant melt at such a rate as to allow the excess water to evaporate without boiling over the sides of the container.

Step 4. After the foaming subsides, the melt is heated to 140 °C. (289 °F.).

Step 5. The wax melt is then poured with good, but not violent, agitation into water which has been heated to 95°C. (203°F.).

Step 6. The heat is removed and agitation continued until the emulsion has cooled to 77° C. (170°F.) .

Step 7. The emulsion is then diluted to the desired solids concentration by the addition of cold water.

A second method for preparing nonionic emulsions of "Epolene E" has been developed by our laboratories and offers many advantages over the standard wax-towater method. This method calls for emulsions to be prepared in a closed vessel under low pressure steam. Using the aforementioned formula as an example, the following procedure is followed for emulsification by this pressure method:

Step 1. All of the ingredients; that is, "Epolene E," surfactants, potassium hydroxide, and water, are placed in a vessel capable of safely withstanding 15 pounds of steam pressure. The vessel must be equipped for agitation.

Step 2. The vessel is sealed and agitation is begun. Heat is applied until the temperature of the liquid is 121°C. (250°F.).

Step 3. Pressure and agitation are continued for 30 minutes after the temperature of the liquid reaches 121°C. (250°F.).

Step 4. The external heat is then removed and the emulsion allowed to cool with agitation to 77°C. (170°F.) before the vessel is opened.

Step 5. The emulsion is diluted with cold water to the desired solids concentration.

This pressure emulsification method is a very simple procedure offering many advantages over the conventional method:

- No separate melt tank required;
- 2. Less handling of ingredients;
- 3. Fewer bad batches. For instance, if an ingredient is omitted unintentionally from a batch and poor emulsification results, the missing ingredient can be added to the mixture and the emulsification procedure repeated to rectify the error and produce the desired emulsion;
- 4. Improved color;
- Provides a way of reclaiming bad batches made by the waxto-water method;
- Increased production rate:
 For example, a 500-gallon batch of emulsion which would normally require eight hours for preparation by the wax-to-water method may be prepared in two hours by the pressure method. This acceleration results primarily

from an increase in the melting rate of the polyethylene wax. Polyethylene per se shows very poor heat transfer and thus is extremely slow melting. In the pressure system, however, the water acts as a heat transfer medium and the melting rate increases significantly.

Preparation of Polish

Nonionic emulsions are used in floor polish formulations in very much the same manner as are anionic emulsions. Basically, the final floor polish formulation should include the nonionic polyethylene emulsion plus a leveling agent and a hardening agent. A wide variety of both leveling agents and hardening agents is available, and this portion of the formulation is left to the discretion of the formulator. However, since nonionic emulsions are only very slightly colored, blending materials should be carefully selected so as to take full advantage of this feature.

Summary

In a study of the factors involved in color formation in the wax emulsion portion of floor polishes, nonionic water emulsions of the light-colored, emulsifiable polyethylene, "Epolene E," were prepared with various commercial surfactants. Optimum results were obtained with a blend of surfactants having an HLB (hydrophilelipophile balance) value of 9.2. A pressure method for emulsion preparation was developed which offers greater handling convenience, lower color, fewer bad batches, and increased production. It is believed that use of a suitable nonionic surfactants system and the pressure method of preparation offer a means of producing, on a fairly consistent basis, satisfactory wax emulsions of low color.

Tierney Succeeds Rogers

Stanley E. Tierney has succeeded the late Russ Rogers as head of the soap research division

of the research laboratories department, Swift & Co., Chicago, it was announced last month. Mr. Rogers died on Feb. 29.

Rutgers Perfumery Course

A new two-year evening program in the chemistry and compounding of perfumery was announced recently by George A. Tapper, director of the Rutgers University extension center in Newark, N. J. The program begins this fall and includes lectures and laboratory courses in perfumery and essential oils the first year; lectures and laboratory sessions in advanced perfumery the second year.

Steffen Arctander, perfumer, now with International Flavors and Fragrances, Inc., New York, is the perfume class instructor.

First year subjects in the series include the various natural perfumery raw materials, their application, identification, origin, and availability, and synthetic perfume chemicals, including their availability, cost, adulteration, and contamination. This course is given on Mondays, lectures from 6:20-8:00 p. m., followed by laboratory sessions, 8:10-9:50, which began Sept. 19.

The course on the chemistry of perfume materials meets Wednesdays, 6:20-8:00 p. m. beginning Sept. 21. Topics covered are the chemistry of essential perfume oils and terpenes, their reactions, properties, and synthesis.

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The second year courses continue the study of perfumery as related to chemistry and are especially designed for individuals seeking advanced training in identification, compounding, and manufacture of natural and synthetic aromatics.

The new Rutgers program, said to be unique in this country, has aroused considerable interest in New Jersey, which does a \$125 million annual perfumery and essential oil business.

Complete details are available by writing Newark Extension Center, Rutgers-The State University, 601 Broad St., Newark 2, N. J.

The wide range of physical properties now available in Eastman's Epolene series of low-molecular-weight polyethylene resins provides formulating flexibility never before possible. For with the addition of three new resins (Epolene LVE, HDE and HD), polish makers can choose now from among seven different types to improve exist-

ing formulations or to develop new products.

Epolene resins produce self-polishing floor polishes that exhibit high gloss, anti-slip, water-spotting resistance and rebuffability. Emulsions of up to 40% solids can be prepared. Properly formulated, polishes made from Epolene are low in color and do not darken or turn yellow. Neither do they build up color with repeated appli-

Choose from either emulsifiable or non-emulsifiable types to obtain the right formulating characteristics and performance properties for your equipment and service.

Epolene E emulsifiable . Epolene E produces wateremulsion floor polishes that exhibit an excellent balance of high gloss, hardness, durability and good resistance to water-spotting, scuff and dirt pick-up. Ideally suited for heavy traffic, polishes made from Epolene E exhibit extreme toughness due to its higher molecular weight.

Epolene LVE emulsifiable . Lower in melt viscosity than the other emulsifiable Epolene resins, Epolene LVE has somewhat better handling characteristics and is the easiest to emulsify. It is softer than other resins in the series, too, and therefore may be expected to contribute better anti-slip properties and rebuffability to floor polishes made from it.

Epoiene HDE emulsifiable . The first high-density emulsifiable polyethylene available, Epolene HDE is much harder than other resins in the series, yet quite easy to handle. A film of unmodified Epolene HDE emulsion is almost as hard as a film from a finished floor-wax formulation (rebuffable type). This increased hardness is due not only to the nature of this high-density polyethylene, but also to the fact that it is more compatible with oleic acid than are other emulsifiable polyethylenes. Epolene HDE restores rebuffability to polymer-containing polish formulations without sacrificing hardness.

Epolene N non-emulsifiable . Epolene N can improve significantly the properties of paraffin, microcrystalline or other waxes and is easily blended with these materials. It can replace part or all of the hard waxes in solvent paste polishes, for example, automotive polishes. Such polishes are characterized by low color, excellent hardness and gloss, and remarkable durability.

Epolene LV non-emulsifiable • Epolene LV and Epolene N are useful in similar applications. The LV type is softer than Epolene N, however, and because of its lower melt viscosity is somewhat easier to handle.

Epolene HD non-emulsifiable . An extremely hard material, Epolene HD is nevertheless easy to handle because of its low melt viscosity. It has a high softening point, and may be blended with waxes to increase their melting points. Epolene HD has a higher density than the other non-emulsifiable polyethylenes in the series.

Epolene C non-emulsifiable . Higher in molecular weight (7000) but lowest in density (0.907) of all the Epolene resins, Epolene C may be used in modifying waxes to increase melting points or to improve toughness and gloss.

Eastman now offers polish formulators 7 basic types of polyethylene

New Epolene resins enable you to formulate broader range of liquid and paste polishes

Туре	Molecular Weight	Brookfield Viscosity (cps. @ 120°C.)	Density	Penetration Hardness (100g./5sec./ 77°F., 10ths of mm.)
Epolene E	2500	1500	0.938	2
Epolene HDE	1500	455	0.956	1
Epolene LVE	1500	400	0.939	5
Epolene N	2500	2500	0.928	1
Epolene HD	1500	340	0.938	0.5
Epolene LV	1500	360	0.925	3
Epolene C	7000	16,000	0.907	7

If you are using low-molecular-weight polyethylenes in your polishes, investigate the complete Epolene series. Your Eastman representative will gladly explain the advantages of each of the resins in the series and will show you how to realize the most profitable use of them in your formulations. Ask him for specific formulating assistance and about the new time-saving, cost-cutting emulsifying technique developed at our laboratories.

SALES OFFICES: Eastman Chemical Products, Inc., Kingsport, Tennessee; Atlanta; Chicago; Cincinnati; Cleveland; Detroit; Framingham, Massachusetts; Greensboro, North Carolina; Houston; New York; Philadelphia; St. Louis. West Coast: Wilson and Geo. Meyer & Company, San Francisco; Los Angeles; Portland; Salt Lake City; Seattle.



If it can take more abuse and take it longer, your floor polish has a chance to outsell all others.

These "others" are the 200 or more other brands with which yours must compete for the \$40 million commercial-industrial market. What will it take to gain top sales position?

A winning combination of hardness, gloss, slip resistance. Plus durability, rebuffability and easy removal.

The polish having the best chance of dominating this market will contain a generous share of Durez resin to enhance these properties.

We've made thousands of resin formulations and have new ones always under development. One of these is certain to fit your very special formulas to give the properties you've been seeking.

Why not write us for more information?

If you prefer to buy fusions of resins and wax, we supply Durez resins to many specialty processors. Ask for their names.

DUREZ PLASTICS DIVISION

410 WALCK ROAD, NORTH TONAWANDA, N. Y.

HOOKER CHEMICAL CORPORATION



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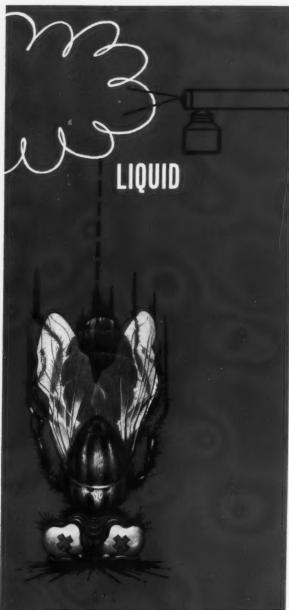
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PESTICIDE RESIDUES

Use of radioactive tracer method to determine possible residues in milk and meat from dairy cows.

UR present day standards of living are requiring high levels of quality production of many agricultural products. There are many examples illustrating the necessity of using proper pesticides to accomplish these ends. Not only must we use a pesticide effectively to control the pest-we must use it in such a manner that we, as consumers, will not be endangered. Some of our most vital food products stemming from agriculture are dairy products and meat. The milk cows and beef cattle producing quality products may have come in contact with an insecticide or insect repellent at some stage in the production of these important food items. The animals could have encountered the pesticides indirectly from forage residues or they might have been sprayed directly. In either case, you and I, who consume milk, cheeses, ice cream and meat in fairly sizeable quantities, want to be assured that we are eating a wholesome, safe product. This can be done by using the pesticide in such a way that it will not present a hazard. We will concentrate our discussion on some very sensitive methods which will enable us to provide such assurance. Let us limit the discussion a bit further and consider only those materials which are to be used directly on the cattle. The principles in the analysis problem are the same, of course.

By L. K. Cutkomp*,
Department of Entomology
and Economic Zoology,
University of Minnesota,
St. Paul

The problem is to be able to provide reliable evidence that no chemical (insecticide or repellent) is present in milk from a sprayed animal, and that no chemical, or at most extremely small quantities may be found in edible meat. These requirements are to be in accordance with rulings of the Food and Drug Administration which is responsible for enforcing the Food, Drug and Cosmetic Act and its Miller Amendment. Some compounds are not considered a hazard if they are present in minute quantities in meat. Thus, up to 3 ppm methoxychlor can be present in meat from cattle, goats, hogs and sheep. Up to 4 ppm malathion are permissible in the same animals and also in poultry. Each new compound will have to be considered on its own chemical and biological characteristics, however. Milk is not to be contaminated and, as such, a zero tolerance must be met with all candidate chemicals. On the basis of experiences with other compounds, chemicals should be detectable by chemical analyses at levels of 0.02 to 0.05 parts per million. The wisest procedure is to obtain as complete information as possible on the requirements of the Food and Drug Administration for the particular chemical and analytical procedures to be followed. The sampling of meat for the detection of the chemical would include lean meat, fatty tissues, liver and kidney. If isotopes are to be employed, the excretory products, feces and urine should be monitored at least, if not utilized in a more complete analysis.

The Objective

The objective, with respect to analysis, is to make an accurate determination of the presence or absence of the sprayed chemical in milk from a treated animal, and to determine the levels at which the chemical is present in meat tissues, or if the chemical is absent. The Food and Drug Administration requires that a suitable chemical determination be used and that such a method be made available to FDA. The use of isotopes can also support the chemical determination at very low levels to assist in establishing metabolic breakdown.

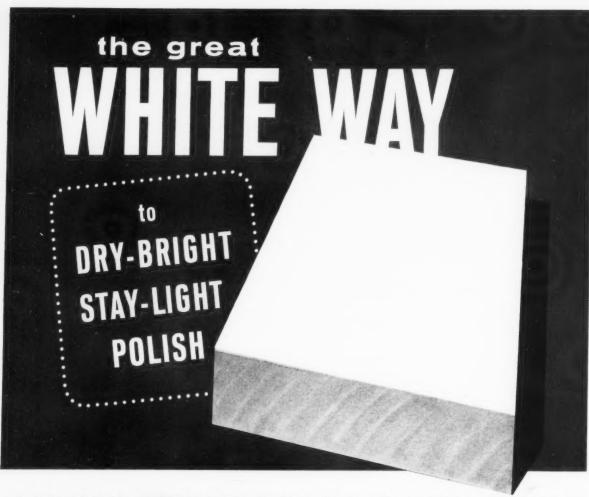
Need to Employ Isotope

The decision as to whether to employ an isotope depends largely on the sensitivity of lack of sensitivity of the chemical method and whether the metabolic fate needs to be determined. With increasing emphasis on full knowledge of the chemicals and their degradation it seems reasonable to assume that the use of isotopic methods as analytical tools will grow. Further, the acceptance of isotopes as reliable tools will be greater as time goes on.

Certain types of isotopic methods, notably the isotope dilu-

^{*}Paper presented during 46th midyear meeting, Chemical Specialties Manufacturers Assn., Chicago, May 17, 1960.

Paper No. 1727 Miscellaneous Journal Series, Minnesota Agricultural Experiment Station, St. Paul 1, Minnesota.



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tion procedure, have certain advantages not always recognized. Advantages include: (1) determination of a pesticide residue level from tissues which have not been treated with radioactive materials, (2) ability to determine levels of the pesticide without quantitative recovery, and (3) reducing the useful lower limits of a particular analysis, assuming the radioactive portion has sufficiently high activity.

In our considerations about the use of the isotopic material we need to be aware of the limitations, of course. They include the need to equilibrate an isotope tagged material with the unlabelled chemical, the preparation or purchase of labelled materials, and the most obvious need, an analyst in a laboratory equipped with a minimum of radioactive instrumentation.

Selection of Method

Commonly we think of radiotracer techniques being used as follows: synthesize the selected isotope into the chemical, apply the labelled compound as desired (on an animal) and subsequently determine the small fraction that remains in a tissue or product. When we are concerned about a very practical application such as spraying cows we may be up against a very costly and possibly hazardous procedure. There may be ways of minimizing the hazard, but the cost can remain prohibitive.

There are ways of avoiding the large quantities of materials and reducing the hazard simultaneously. The method of choice would appear to be one known as the Isotope Dilution Technique. Certain modifications or alterations of the technique are also useful in some cases. A second technique may be useful in some instances, but is not likely to find as wide an application. The technique involves a reaction between a labelled reagent and the chemical under consideration. To be used successfully the chemical reactions of the compound and reagent must be well documented. This method

should be kept in mind, but will not be discussed here.

The Isotope Dilution Technique is a method of chemical analysis in which the hunted material is diluted with a precisely known quantity of a particular isotopic form of the same substance.

Hevesy and Hofer (1934) are said to be the originators of the method. The isotopic substance may be either an isotope of one of the elements or a discrete chemical compound. Despite the usefulness of the method we seem to have very few cases where the technique has been employed with pesticides. The technique has been used to determine the gamma isomer of benzene hexachloride (Craig and Tryon, 1953) in a mixture of other isomers. Trenner et al (1949) have also used deuterium-labelled gamma BHC in an isotopic dilution method. In a comprehensive article on the subject Redemann and Meikle (1958) give examples of use with the herbicide Dalapon (2,2-dichloropropionic acid).

Let us be more specific to gain an appreciation of this technique. The principle is this: Add a known minute amount of a radioactive compound to the crude residue sample containing the pesticide. This is done before the interfering substances have been removed. Mix well and use a good extraction method to yield the pesticide. Determine the amount of pesticide present and recheck the radioactivity. If some of the radioactivity has been lost this is due to the fact that the radioactive compound has been diluted with the non-radioactive pesticide. Thus you can correct back to determine what percentage is radioactive and have information on the amount of non-radioactive pesticide. If all the radioactivity is recovered there is no pesticide residue because there has been no dilution.

We can illustrate with an insecticide such as methoxychlor. Suppose we take 100 grams of milk from a cow which has been sprayed with methoxychlor. We have obtained a small quantity of carbon

14 labelled methoxychlor (a few milligrams). The labelled methoxychlor will produce 10 million counts per milligram from the isotope. We have found that after adding the radioactive material to milk and purifying the extract one-tenth of the radioactivity remains. Thus, if we follow this purifying and extracting procedure exactly we can obtain I million counts per milligram in a counter which is 100° efficient. This is possible in some instruments, e.g. an electrometer where the C 14 can be measured as a gas. For many cases, however, a thin window Geiger counter might be available which would detect only about onethird of the counts. Our actual count will then be 333, 333 cpm. per milligram or 333 counts per minute per microgram. Detection of one microgram in the initial sample of 100 grams of milk is onehundredth part per million. If we wished to have our radioactive counts between 500 and 1000 counts per minute we would need to double the amount of C 14 Iabelled methoxychlor, thus using two micrograms for Geiger counting. Suppose we added 4 micrograms of radioactive methoxychlor to the 100 grams of milk and extracted from one-half the milk. We would expect a count of 666 per minute in the 50 gram sample.

But now we need to visualize the final step or the point that we are seeking. We have used a purification and extraction method from the milk that gives us 333 counts per minute per microgram of labelled methoxychlor or 666 counts in half the milk sample (50 grams). If there were no residue of unlabelled methoxychlor in the milk we should have no change in counts per mintue. If, on the other hand, we had only one-half the counts this would indicate that an equal amount of unlabelled methoxychlor was in the mixture and had served to dilute the radioactivity by half. Thus we could say we had four micrograms of the

(Turn to Page 103)



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Key Brulin personnel, seated, left to right: John T. Casey, president and general sales manager, Louis E. Brunner, executive vice-president, purchasing and production. Standing: Robert H. Brunner, advertising and promotion; Charles K. Doty.

accounts payable: Harold R. Gaalema, assistant secretary, credit manager and director of employee benefits programs: R. M. Bradford, secretary-treasurer and general manager.

Brulin & Co. 25 Years Old

N the business world of today where it is not uncommon to see firms marking 50th, 75th or even 100th anniversaries, celebrating a 25th anniversary would be a routine exercise, except Brulin & Company . . .

- . . . Is a flourishing firm that was born in the shadow of the Great Depression.
- ... Has expanded its line from soaps and waxes to a full line of building and industrial cleaning specialties, and to such modern offspring of the nuclear age as specialized, specific mold release agents for polyure-thane foam plastics fabricators.
- . . . Marketing solely through its own sales force, has exexpanded distribution from a handful of salesmen in

By R. H. Brunner

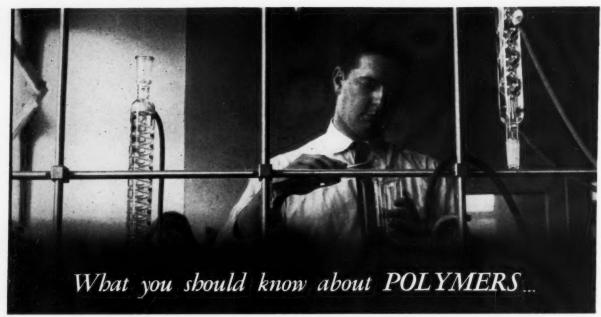
- the midwest, to a force of 130 full time men covering the entire U. S.
- . . . Has increased factory space at the main Indianapolis plant from 10,000 sq. ft. in the autumn of 1935 to 65,-

000 sq. ft. at the present time, and in 1953 established a 25,000 sq. ft. complete manufacturing facility in Oakland, Calif. to handle growing sales volume on the west coast.

. . Supports a payroll of upwards of 200 men and

Overall view of headquarters offices and manufacturing facilities of Brulin & Co. at 2939 Columbia Avenue, Indianapolis, Ind.





In the short span of seven years, you've heard and read a great deal about the polymers that have revolutionized the floor polish industry. Although the list of available emulsions is impressive, 9 out of 10 floor polish manufacturers still stand by the polymers that outpace and outperform all others . . .

UBATOL

As a series of styrene and acrylic based polymer and co-polymer emulsions, UBATOLS are known for their standout features in the areas of GLOSS and DURABILITY. The specific UBATOL you select for use in your formulation has several distinctions which make it unique. Let's examine their character one by one.

The U-2000 UBATOL series of polystyrene emulsions provide an excellent base for high gloss floor polishes because of their ultra fine particle size.

U-2001 UBATOL was the first of its kind to make a debut into the floor polish industry and remains today as the standard of the industry. In fact, all of the floor polish made from this polymer since 1953 would amply cover the state of Texas. U-2001 adds toughness and water resistance to floor polishes with the added advantage of recoatability. Formulations made up with this polymer ably resist "whitening" when "second coated"

U-2003 UBATOL has one third the particle size of U-2001 (for greater gloss) and an increased solids content from 36 to 40%.

U-2007 UBATOL is a milky white polymer which was developed to meet the demand for a

clear, non-yellowing, floor polish. Because of its exceptional gloss and film clarity, U-2007 is primarily recommended for household floor polishes.

The U-3000 UBATOL series of acrylic emulsions are used as modifying components to improve the toughness and water resistance of polishes compounded with the U-2000 series. In some cases, these polymers are used to improve the "whiteness" of a floor polish. They include:

U-3040 UBATOL . . . Its use will result in hard, tough films.

U-3045 UBATOL . . . Will give flexible, tough films.

U-3050 UBATOL... Compromises in hardness between U-3040 and **U-3045 UBATOL**. The compatability of U-3050 with every known wax and resin on the market makes it a potent companion to the U-2000 series.

U-3101 UBATOL . . . Unlike other polymers in the 3000 series, U-3101 UBATOL is a light colored, non-film forming acrylic which, in itself, can be compounded into a floor polish or used as an additive with U-4001 UBATOL U-3101 combines toughness with built in removability and is recommended for buffable and household formulations.

U-4001 UBATOL stands apart from other U B S polymers. This floor polish component is unique because it combines the excellent gloss of the styrenes with the toughness and durability of the acrylates. U-4001 is rated tops for film clarity.

So, if you have yet to select the right UBATOL for your formulations, drop us a line. Samples, technical data and product consultation available on request.



U B S CHEMICAL COMPANY

A Division of A. E. STALEY Manufacturing Company 491 MAIN STREET, CAMBRIDGE 42, MASS.

women, including factory, clerical, research and administrative personnel at Indianapolis and Oakland, as well as the salesmen.

. . . Numbers among its thousands of regular customers such household names as Sears, Roebuck and J. C. Penney, plus a roster of industrial giants reading like a Who's Who of American business.

During the 25 years in which these milestones were reached, all of the necessary expansion was financed largely through earnings. A recently completed, exhaustive audit confirmed the excellent fiscal position of the firm. Employees enjoy the benefits of liberal hospitalization, sickness and life insurance programs, and a generous retirement program — advantages that extend to the sales force as well as to salaried and wage-and-hour employees.

Much of the progress of Brulin is traceable directly to a number of product "firsts" introduced through research and development to industrial, commercial and institutional users. Among these are:

1. The first water emulsion floor wax introduced into the U. S.

 The first large selling liquid cleaner, "Octo-Solve," for institutional use. Today "Octo-Solve" is a federally registered trademark, and many who have never heard of Brulin

Don C. Olson, vice-president, chemist, and manager of Oakland, Calif., plant.



Brulin's technical staff: 1 to r.: H. L. Green, vice-president in charge of research and development and J. A. Neuberger, assistant chief chemist. Not shown: D. C. Fromm, chemist.



know the name "Octo-Solve." It continues to be Brulin's largest selling product.

The first liquid steam cleaning compound.

4. The first heavily promoted proprietary solvent blend for general degreasing purposes, Brulin's Solvent Degreaser. Designed primarily for safety, this product replaces flammable petroleum solvents and highly toxic chemicals.

5. A new concept in floor maintenance — sealing composition materials with a non-flammable water emulsion seal, "Brulin's Floor-Prep."

Obviously a dedicated research staff and well equipped laboratories are involved in a development program of this dimension. A host of lesser products have been introduced also during Brulin's first 25 years by a research team that must also review constantly the changing raw materials picture to effect improvements in the line, minister to the company's salesmen and customers in the form of technical help on specialized cleaning problems; and at the same time, be responsible for rigid production control of punishingly high standards over the flow of nearly 100 items from vats at Indianapolis and Oakland.

Brulin is a privately-held Indiana corporation, with principal interests held by Jack T. Casey, Louis E. Brunner and Mrs. William Nottingham, all of Indianapolis.

Mr. Casey is president and general sales manager. He attended the University of Illinois, worked for the old Continental Car-Na-Var Corporation and the Warren Refining Corporation before joining Brulin.

Mr. Brunner, the executive vice-president, emigrated from Germany to the United States in 1925 with previous education and experience in soap and wax making. He served as chief chemist for Car-Na-Var before leaving to help found Brulin. He is responsible for production, purchasing and construction and processes.

(Turn to Page 201)

Hoyt Childress, Field Sales Manager



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To produce the best in buffable floor polishes the choice of the new DUROXON J-324V is a "natural." This extra hard, purely synthetic wax produces very durable films which dry to a high gloss and do not discolor even the lightest floors. It is produced in the world's largest, fully intergrated Fischer-Tropsch plant under conditions of perfect quality control.

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Many times in the past we have been asked by floor-polish manufacturers: Can you suggest a good starting formula for a bright-drying polish of light color which can be easily re-buffed and which protects the starting character as that of a nationally starting formula for a bright-drying polish of light color which can be easily re-butted and which protect floor with a true wax, non-resinous film. The film should be of similar character as that of a paste-wax.

The problem is not as simple as it sounds at first. There are many re-buffable self-polishing products on the the problem is not as simple as it sounds at miss, there are many re-bumable self-polishing products on the market, but most of them rely on up to 20% or even more of alkali-soluble resin for leveling and initial market, but most of them rely on up to ZU% or even more of alkali-soluble resin for leveling and initial gloss. To formulate a high-gloss, well-leveling floor-wax containing little or no resinous components presented

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Here's what the chief chemist of this car polish maker reports: "In my formulation efforts, I have tried almost all viscosity producers and have been unable to obtain anything which will do exactly what Carbopol 934 does.

"I find that a small amount of Carbopol 934 gives the desirable slight amount of thickening required, aids in stabilizing the emulsion, does not hasten or retard the drying, leaves the ease of application and the ease of wipe-off exactly as it is without the thickener. This is not the case with many other viscosity producers—they tend to change the chemical and the physical action of the product."

Further, this chief chemist reports that far larger

quantities of Carbopol 934 are used in his cleaner, since a very thick consistency is needed in this product. Again, Carbopol is doing the job without any change in the action of the cleaner.

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Carnauba Wax Molecules

By Lee M. Prince,*

Reichhold Chemicals, Inc., White Plains, N. Y.

S late as 1950 (5) Marsel reported "no apparent correlation between emulsification ability and any particular test value of carnauba wax." Recent advances (4) in the theory of micro emulsions, however, now make this correlation possible. Table IV illustrates how materials which do not normally form micro emulsions in the formula shown can be made to do so by the addition of suitable alcohols as amphiphiles. Using the new theory as an analytical tool, we can work backwards to explain how the molecules in carnauba wax interact physically at the interface to produce a micro emulsion.

The emulsions in Table IV were obtained by varying the composition of the oil phase in the following fixed formulation:

	grams
Oil phase (oil plus alcohol)	20
Oleic acid	4
2-Amino-2-methyl-1-propanol	2
Water (water to wax technique)	180

Each emulsion listed represents the smallest particle size emulsion obtained by varying the ratio of the two oil-phase components, i.e. the alcohol and hydrocarbon or wax. Immediately above and below this optimum ratio, particle sizes were larger. Neither component produced micro emulsions when substituted by itself in the formula.

As the chain length of the hydrocarbon increases, the amount of alcohol required to yield a micro emulsion also increases. When Part II

the length of the hydrocarbon molecule exceeded that of the fatty alcohol no micro emulsion formed. This important observation is indicated by an X in the table. The order/disorder pattern here parallels that in solvent retention systems.

Ouricury wax was utilized as a long chain alcohol since it has an hydroxyl value of 130. It seems to be even more powerful as an emulsifying ingredient than myricyl alcohol. (6)

The ester waxes, spermaceti and Chinese insect as well as stearone, follow the pattern of the hydrocarbons. The relationship between the structure of these waxes and the paraffinic hydrocarbons above will receive special attention a little later.

Stepwise formation of micro emulsions by these mixtures has been interpreted (4) as an indication that, under favorable circumstances, the nonpolar hydrocarbons originally derived from the oil phase actually enter or penetrate the interfacial monolayer and are responsible there for the formation of the micro emulsion. This mechanism is illustrated in Figure 2.

Length of the molecules mentioned in Table IV are shown under "Legends" in Figure 2. A length of 1.3 Å is assigned to each carbon atom in the chain. Thus, myricyl alcohol, C₃₀, is depicted as 41 Å long. These are rough approximations but they serve our purpose.

Example A illustrates the case where the molecules of the oil phase are longer than either the amphiphile or oleate soap ion. No penetration takes place so that the soap ion and alcohol are adlineated substantially parallel to one another and perpendicular to the interface. There is strong association among these molecules at the water side of the film due

Table IV. Composition of Oil Phase in Minimum Particle
Size Emulsions

Oils	No. Carbon Atoms	Cetyl (C ₁₆)	Myricyl (C ₃₀	Ouricury Wax*
n-heptane	C,	1.5 g.		
n-dodecane	C12	2.0		
n-hexadecane	C16	3.0		
n-octadecane	Cis	3.0		
Kerosene	Av. C	2.0	1.0 g.	2.0 g.
Nujol	C ₁₆ -C ₂₂	X	3.0	5.0
Paraffin Wax 133-5°F	C., -C.,	X	4.5	9.0
Paraffin Wax 142-5°F	C.,,-C.,,	X	5.0	10.0
Microcrystalline Wax 190-195°F	C ₁₀ -C ₈₀	Х	Х	15.0
Spermaceti Wax	C_{16} , C_{16}	X	12,0	10.0
Stearone	C17, C17	X	12.0	10.0
Chinese Insect Wax	C_27, C_27	X	X	14.0

Legend; X means no micro emulsion could be made. *Used as an alcohol

^{*}Paper presented at 46th midyear meeting, Chemical Specialties Manufacturers Assn., Chicago, May 18.

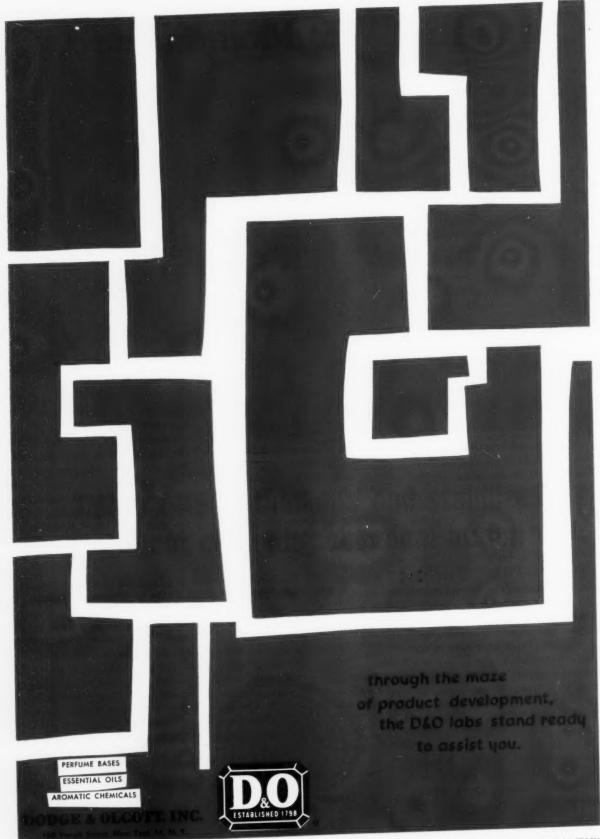
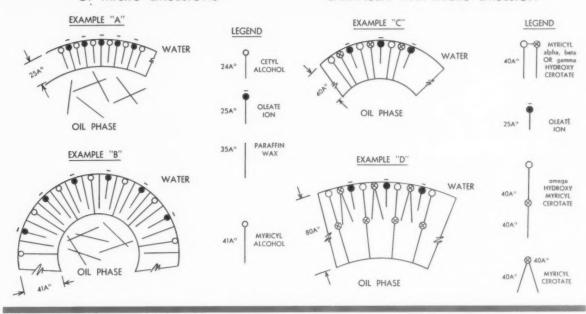


FIG. 2 – MECHANISM OF FORMATION OF MICRO EMULSIONS

FIG. 3 – MECHANISM OF FORMATION CARNAUBA WAX MICRO EMULSION



to hydrogen bonding and strong association among the tails due to van der Waals forces. When two species behave in this manner they are called a "molecular complex." The state of such a film is liquid condensed. The amphiphile has produced sufficient disorder in the original soap micelles in leaflet form to liquefy this ordered array of molecules so that surface tension forces have taken over and produced dispersed droplets in the presence of nonpolar hydrocarbon. These droplets are, however, relatively large.

When oil-phase molecules as in Example B can penetrate the film and become interspersed between the alcohol and soap molecules even more disorder is produced and the film becomes less condensed. While the association among the tails is still the same, since all these tails are paraffinic, there is less opportunity for strong hydrogen bonding among the head groups since the penetrating hydrocarbons have no heads. This causes the water side of the interface to expand more than the oil side and imposes the degree of curvature on the emulsion droplets required for fine particle size. This is one of the ways in which micro emulsions are formed.

When the alcohol or amphiphile is as long or longer than the hydrocarbon, it can pull the non-polar molecule into the interface. More scientifically, hydrocarbon molecules can penetrate a molecular complex between an amphiphile and fatty acid ion, when the amphiphile is as long or longer than the hydrocarbon.

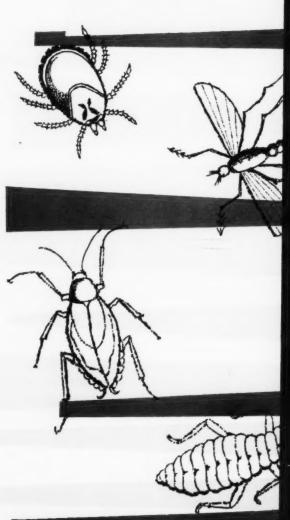
If there is a possibility for the oil molecules to associate with molecules of the interfacial film, a micro emulsion readily forms. This form of association can take place with either of the two original, monolayer-forming components but the micro emulsion is better if the association is with both.

However, carnauba wax probably contains at most only a minor percentage of hydrocarbon material, all of its species being essentially oxygenated in one form or another. We must therefore look for an explanation other than that offered in Figure 2 for producing sufficient disorder for expansion of the interfacial film. If we consider that carnauba wax con-

sists essentially of 65 per cent hydroxylated esters and 35 per cent normal esters, then we must look for the explanation in the orientation of these molecules at the liquid-liquid interface. Since we know that a good micro emulsion is formed by carnauba, we must assume a disordered, liquid film in which one or more of its polar molecules acts as an amphiphile, Figure 3 offers an explanation of how this occurs at a carnauba waxwater interface.

While myricyl alcohol is capable of emulsifying spermaceti wax (cetyl palmitate) and stearone (18-pentatriacontanone) it does not emulsify Chinese insect wax, a much longer-tailed compound. (See Table IV.) Ouricury wax was needed to do this. Irrespective of what molecular species in ouricury are responsible for this, it is obvious that an amphiphile longer than a C30 monohydric alcohol is required to pull a C30-tailed ester into the interfacial film where it can expand the film and thereby produce a micro emulsion. The two tails on these esters offset the polarity of the ester linkage so

(Turn to Page 103)



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New York Chicago Los Angeles San Francisco Portland, Ore that they behave essentially as branched-chain paraffins at a liquid-liquid interface.

If the hydroxy group on the hydroxylated ester of carnauba wax, which we must assume acts as the amphiphile here, were at a position adjacent to the ester linkage, such a molecule would orient itself at the interface so that its maximum effective length is only 30 carbon atoms (Example C). As we have seen with Chinese insect wax and myricyl alcohol, this could not draw the normal esters into the film. In order to perform as an expanding agent in the film, the ester linkage adjoining the alcohol would have to provide the expansing or disordering force itself. This is not too likely a possibility.

A more reasonable assumption is that the omega-hydroxylated ester orients itself at the interface with the terminal hydroxy group at the water side and the hydrocarbon tails and ester linkage extending perpendicularly towards the oil phase (Example D). This orientation serves a dual purpose. The amphiphile is now long enough to draw some or all of the nonhydroxylated esters into the interface and at the same time produces some disorder of its own via the ester linkage which is now located in the middle of the interface. There appears to be a delicate balance of species in carnauba wax because it will only tolerate about 10 per cent paraffin wax before its ability to form micro emulsions is lost.

This analysis does not explain whether or not the diesters (esters of long chain oils and long chain acids) actually penetrate the film or not. If they did, they would be responsible for a considerable expansion at the water side. Hydrocarbons, if present to the extent of 12 per cent indicated by Findley and Brown, would help expand the film. But they are not nearly as effective, gram for gram, as esters in this capacity.

In view of evidence from

the X-ray analyses and from the mechanism of photosynthesis of hydroxy acids, indicating that the hydroxy groups on the hydroxylated esters are actually at the omega position, the clongated orientation appears the more probable. This behavior suggests that similar components of other waxes act as amphiphiles and are responsible for their emulsifiability. Waxes such as candelilla, ouricury, and the synthetic oxidized microcrystalline, Fisher-Tropsch and polyethylene waxes should also be susceptible to this kind of analysis.

It is hoped that the foregoing has shed some light on the (1955) some three years earlier. I have changed the unit from milligram to microgram. It follows:

A = specific activity of radioactive pesticide in counts per minute (cpm.) per microgram

a = ug. of A added to residue sample before extraction

b = ug. of unlabelled pesticide in the sample initially

c = specific activity (in cpm.) of total pesticide in the sample after dilution with the radioactive compound.

Thus C(a+b) = aAWe wish to solve for

We wish to solve for b, therefore b = a (A/C-1)

= 2 (333/166.5 - 1)

 $b \equiv 2$ (1) for the 50 gram sample of milk.

relationship between the molecules of carnauba wax and its performance properties. Further investigations along similar lines should prove of value.

Acknowledgments

Thanks are due Professor Jack H. Schulman, School of Mines, Columbia University, and Dr. Walther Stocckenius, Department of Cytology, Rockefeller Institute, New York, for their valuable suggestions.

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Pesticide Residues

(From Page 91)

residue in a 100 gram sample of milk or 0.04 ppm.

A simplified equation of these events has been suggested by Redemann and Meikle (1958) and a similar one by Winteringham

The example given has a general application useful for any appropriate isotopes. The calculations are a bit simpler when we need not concern ourselves with decay of the radioisotope, carbon 14 having a half-life of 5570 years. Commonly used isotopes such as sulfur 35 with a half-life of 87.2 days and phosphorus 32 with a half-life of 14.2 days, either of which might be used with a compound such as malathion, have a rapid decay period with radioactivity being continuously reduced during the experiment. The planning of the experiment should be such that the isotope will be used within a period not to exceed twice the half-life of the isotopic element.

Radioactive Form

A new potential insecticide or repellent will not have a radioactive form available. Your chemists may consider making a labelled form or you may pay some commercial company to make it. Since there are hundreds of labelled compounds available the problem of preparation is more feasible. If the compound possesses non-exchangeable hydrogen atoms it can be labelled with tritium (Hydrogen³)



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by a method termed the Wilzbach technique. The hydrogen-containing compound is left in contact with tritium gas for a few days up to two weeks; the resulting compound is repurified. Such a labelled compound might be feasibly used in an isotope dilution technique since there would be little chance of hydrogen exchange in contrast to treating an animal where metabolic process might bring about many hydrogen exchanges, thus give false readings for the pesticide. It may be noted in passing that small amounts of tritium (up to 250 microcuries) and carbon 14 (up to 50 microcuries) do not require licensing or authorization from the Atomic Energy Commission.

Additional Considerations

The use of isotopes for residue determinations may be very desirable for some problems. However, when we are dealing with the metabolism of an unknown chemical in an animal we may find unpredictable changes in tissues which may cause extra expense, time, and labor. These features are unwanted, particularly in an animal as large as a cow. Because of this I would like to suggest that serious consideration be given to combining some features of the isotope-metabolism studies with the toxicological studies which must be carried out with any potential pesticide. Small mammals, such as rats can be used and results obtained should reduce possible errors when dealing with a large animal.

Summary

The potential human hazard of insecticides or repellents applied to dairy cows and beef cattle must be recognized. Microanalytical techniques need to be employed to determine the presence or absence of a pesticide in milk and meat. The use of isotopes, radioactive or stable, can greatly increase the sensitivity of the analyses. One method, the Isotope Dilution method is described to illustrate a sim-

pler, more economical way of arriving at the desired sensitivity. A suggestion is made that such a technique might be profitably incorporated in early toxicological studies on rats before the determinations are made on cows.

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Drycleaning Detergents

(From Page 50)

Materials and Equipment

Soiling machine as described in Detergency Evaluation and Testing by J. C. Harris, page 71, Interscience Publishers, 1954.

Launder-Ometer (Atlas) set to operate at room temperature at 42 rpm.

Pint jars and ¼-in, stainless steel balls for Launder-Ometer, Reflectometer, Photovolt Model 610,

with green tristimulus filter. White wool flannel (Botany Style 404, prescoured)

Trichloroethylene, technical. Stoddard solvent complying with

ASTM D-484. Perchloroethylene, technical. Lampblack, Monsanto Grinders

No. 2. Nujol.

Edible tallow.

Pinking shears.

Support for cloth swatches; two concentric rings of about 2-in. diameter to clamp swatches.

Forced draft oven to bake soil cloth. Desiccator with saturated sodium acetate solution.

Procedure: Preparation of soiled wool. Make soil solution by mixing 2.0 g. edible tallow, 6.0 g. Nujol, and 0.125 g.

lampblack with 300 ml, trichloroethylene in a Waring blender. Dilute with 4 liters of trichloroethylene and mix well. Fill reservoir of soiling machine with soil solution. Cut 7-in. x 22-ft, strips of wool flannel. Pad through soil solution and pass through soil machine repeatedly until reflectance is 25-30%. Photovolt should be standardized with a plaque having similar reflectance. Use fresh soil solution for each strip of cloth. Festoon soiled wool in a forced draft oven and bake for one hour at 90°C. Place in a glass jar or polyethylene bag and, store at about 45°F. in a refrigerator,

Soiled wool detergency evaluation. Cut soiled wool cloth into 3-½ x 4-in, swatches with pinking shears and randomize by mixing. Number and record reflectance (before washing) of each swatch. Keep swatches from each soil roll and each batch separated. Condition swatches at 75% relative humidity for 24 hours prior to the detergency test. This may be done by storing in a desiccator over saturated sodium acetate solution at room temperature.

This test is made with duplicate jars for each detergent in each run. A standard detergent and a blank should also be included. Add 200 ml, of 2 per cent by volume detergent solution (Stoddard or perchloroethylene solvent) and 10 stainless steel balls to each jar. Place two previously-numbered swatches in each jar and wash for 20 minutes in the Launder-Ometer, Dump detergent solution, add 200 ml, of fresh solvent to each jar, and run rinse for 20 minutes in Launder-Ometer, Dump jars and place swatches on paper towels to air dry at room temperature.

Measure reflectance of swatches both before and after washing. Place each set of four swatches for the duplicate jars on the swatch support. Standardize reflectometer with a 25-30% reflectance standard before washing swatches and with a 45% reflectance standard after washing.

Per cent soil removed = $\frac{A - B}{C - B} \times 100$

where A = Reflectance after washing
B = Reflectance before washing
C = Reflectance before soiling

VI. WATER-SOLUBLE SOIL

REMOVAL Materials and Equipment

Padder or hand-operated wringer. Launder-Ometer set to operate at 42 rpm at room temperature.

Infrared lamps. Burette, 50-ml. capacity.

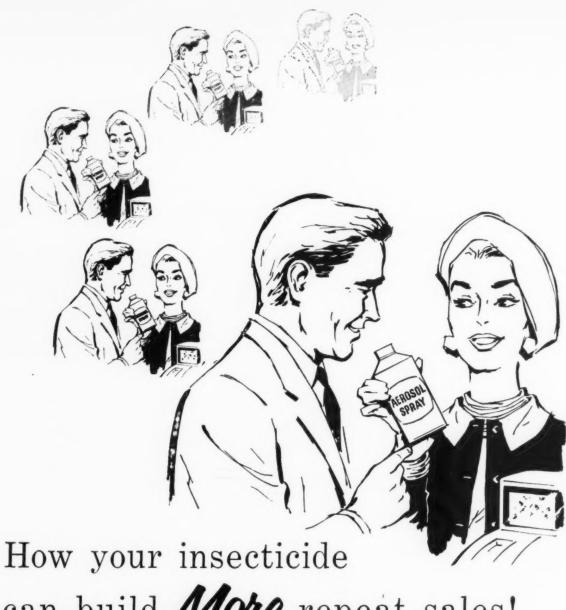
Erlenmeyer flask, 250-ml, capacity. Silver nitrate solution, 0.2 N, previously standardized against reagent-grade sodium chloride.

Fluorescein indicator solution at 0,2% concentration.

Dextrin solution at 2% concentration. Sodium chloride solution, 1.5 N,

aqueous.

White viscose rayon cloth, Pint jars and ¼-in, diameter stainless steel balls for Launder-Ometer, Pinking shears.



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An effective...yet pleasantly-scented insecticide is just what every consumer is looking for. And to be certain your insecticide fragrance assures repeat purchases...rely on Givaudan's wide range of "popularity-proved" odors to help you capture and keep a larger share of the insecticide market. Write today for information and samples of our standard line.



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SOAP and CHEMICAL SPECIALTIES

Desiccator containing saturated solution of sodium acetate.

Stoddard solvent complying with ASTM D-484.

Perchloroethylene, technical.

Procedures: Preparation of standard sodium chloride soiled cloth. Pass a 4-in, wide x 50-ft, long strip of rayon through a 1.5 N sodium chloride solution and then through padder rolls or a wringer, Following this, dry cloth supported in a horizontal position over infrared lamps. Then, cut soiled cloth into 4 x 4-in swatches. Mix swatches from each strip to randomize. Select 10 swatches from each strip and analyze for sodium chloride content. Place one swatch in a 250-ml. Erlenmeyer flask containing 50 ml. of distilled water. Add 5 ml, of dextrin solution and 1 ml. of fluorescein solution. Titrate with 0.2 N silver nitrate to a distinct salmon colored end-point.

Calculate the sodium chloride content per swatch;

mg. NaCl =

ml. AgNOa x NAgNOa x 58.45

Calculate the average number of milligrams of NaCl per swatch* for each strip of cloth soiled.

Evaluation of water-soluble soil removal. Condition a set of swatches from a given strip of cloth at least 24 hours in a desiccator containing saturated sodium acetate (75% relative humidity). Place a 200 ml, of 2% by volume detergent solution (Stoddard or perchloroethylene solvent) and 10 stainless steel balls in each Launder-Ometer jar. Adjust solvent to correspond to 75% RH by procedure VII. Add two swatches to each jar. Prepare 2 jars for each detergent tested. Each test series should include a standard detergent, Wash for 20 minutes in the Launder-Ometer, Dump detergent solution and add 200 ml, of fresh solvent. Run rinse for 20 minutes, empty jars, and air dry swatches on paper towels.

Place each dried swatch in a 250ml. Erlenmeyer flask containing 50 ml. of distilled water. Add dextrin and fluorescein solutions as before and titrate with 0.2 N silver nitrate as described above for the analysis of the uncleaned

Calculate sodium chloride removed:

% NaCl Removed =
$$\frac{B - A}{B} \times 100$$
,

where: A = mg. NaCl after cleaning B = mg. NaCl before cleaning

VII. RELATIVE HUMIDITY C.H.IBR.ATION

Materials and Equipment

Karl Fischer moisture titration equipment and reagents as described in ASTM D-1533-58T.

Stabilized Karl Fischer Reagent -Fischer Reagent, Fisher Catalog No. SO-K-3.

Standard Water-in-Methanol Reagent, Fisher Catalog No. SO-W-2.

regain)=

(mls.(b) for Blank-mls.(b) for sample) x methanol factor(c) x 100 swatch weight in mgs.

2 x 2-in, viscose swatches.

Mohr pipette, one-ml. capacity with 0.1-ml, calibrations.

Stoddard solvent complying with ASTM-D-484.

Perchloroethylene, technical,

Erlenmeyer flasks, 250-ml. capacity. Screw cap wide mouth bottles, 1 quart capacity.

100-ml. graduate.

Wrist action on platform shaking machine

Procedure: Make up 2000 ml, of a 2% solution of detergent by volume in either Stoddard or perchloroethylene solvent. Determine moisture content of this solution by titrating a 25 ml, aliquot according to ASTM D-1533-58T procedure.

Place 400 ml. of the detergent solution into each of four dry quart-size, screw-cap, wide-mouthed bottles. Pipet water into each bottle, starting with 0,20 ml, in the second bottle and increasing in 0,20 ml, increments for each following bottle. Close bottles and shake vigorously until solution becomes clear, indicating dissolution of water. To each bottle, then add four 2 x 2-inch viscose swatches. Place on shaking machine and shake for at least one hour.

While swatches are being shaken, dry 18-125-ml. Erlenmeyer flasks in an oven at 105°C, for 30 minutes, cool in a desiccator, and finally stopper with rubber stoppers. Then, into each flask, pipet 10 ml, of stabilized Karl Fischer reagent. Stopper tightly again. Save two of the 18 flasks for blank determinations,

After viscose swatches have been shaken in detergent solution for a sufficient length of time, remove each swatch and (after quickly shaking off excess solvent) place in one of the small flasks containing Karl Fischer reagent. Stopper tightly. Allow to react, with periodic shaking, for at least 30 minutes. During this time, moisture on viscose swatch reacts with some of Karl Fischer reagent. Since an excess of Karl Fischer reagent is present, amount reacted is determined by comparing amount unreacted with total amount present before moist viscose swatch was inserted into

Titrate with standard water-inmethanol reagent to a visual end-point (disappearance of brown iodine color from solution) unreacted Karl Fischer reagent contained in each Erlenmeyer flask.

Rinse viscose swatch in methanol at least six times, and then dry at 105°C. for one hour. Desiceate, cool, and weigh to the nearest 0.1 mg.

Determine water content in each of bottles containing solvent and detergent by titrating a 25-ml, aliquot of each according to ASTM D-1533-58T.

(1) % Water by volume, in solvent= ml. K-F reagent x KF- factor(*)

25

(a) = mg, water equivalent per ml, of Karl Fischer reagent

(b) water-in-methanol reagent (e) Factor = mg. water per ml, reagent (b),

(3) Average values for 4 swatches per detergent solution.

(2) % Water on viscose (viscose

Prepare a per cent moisture in solvent vs. viscose regain curve. By means of Chart 1, viscose regain values can be converted into their corresponding relative humidities. In other words, viscose swatches exposed to a certain atmospheric relative humidity for an extended period of time would pick up or absorb the amount of moisture (regain) indicated by the corresponding point on the regain vs. relative humidity CHEVC.

VIII. Precision

Within-laboratory test precisions expressed as 95% confidence limits for a single operator are

a single sperator	Stoddard Solvent	Perchloro- ethylene
Redeposition prevention		
cotton	±1.4%	±1.4%
wool	+29	+2.9
Carbon soil		
detergency	±3.0	± 3.1
Water soluble		
soil detergency	+2.8	±4.2

Advertising (From Page 49)

in a competitive market if that product stands still quality-wise!

Advertising offers a quick effective way for anyone to tell the world that he has improved his product. Assuming the improvement is genuine, the public is quick to notice it and the return on the advertising expenditure is greatly enhanced. There is a constant struggle, as you know, to make one's marketing dollars work.more and more effectively. This struggle acts inevitably as a spur to the development of better and better products.

Research people, of course, are constantly searching for ways to improve the things we buy. But believe me, a great deal of the prodding and pushing and suggestions for those improvements also comes from the advertising end of the business. That's bound to be because the success of a company's

(Turn to Page 110)

^{*}These swatches are prepared by the National Institute of Drycleaning and after being drycleaned are analyzed for NaCl con-tent by N.I.D.

Invitation to Canada...

The Canadian Manufacturers of Chemical Specialties Association extends a cordial invitation to all companies in the United States and Canada to attend its third annual meeting to be held at the

QUEEN ELIZABETH HOTEL Montreal, Quebec October 24-26, 1960

Business sessions will include discussions on a wide variety of subjects of particular interest to the chemical specialties industry of Canada. There will also be group sessions for the various divisions of the Association — Aerosol, Automotive, Disinfectants and Sanitizers, Pesticides, Soaps and Detergents, and Waxes and Floor Finishes.

The Canadian Manufacturers of Chemical Specialties was formed in 1958 to cater to the specific interests of manufacturers in and suppliers to the chemical specialties industry throughout Canada. Accordingly, all companies with an interest in this rapidly growing field will receive a cordial welcome at our annual meeting in October.

President

For further particulars, please write to Canadian Manufacturers of Chemical Specialties Association 3405 Cote des Neiges Road, Montreal, 25, Que. Canada

Bonus New Morton polystyrene development now permits 50% solids latex...saves 20% on price ... builds extra performance into your polish at lower Cost Build bonus gloss into your product ... save money too. Use Morton RWL 110 polystyrene at 50% solids concentration. No

Build bonus gloss into your product... save money too. Use Morton RWL 110 polystyrene at 50% solids concentration. No other polystyrene gives such a lustrous gloss, hard film and rates so well on other polish qualities. Morton's research proves it... so do polish-makers' tests.

Save money with Morton RWL 110, compared with conventional 36% polystyrenes—20% savings on price of latex solids . . . large savings in freight costs.

Because of its high solids level, RWL 110 is the ideal polystyrene for polish concentrates. You will find that RWL 110 will exceed your needs on important polish features . . . scuff resistance, hardness, leveling, slip resistance.

Morton also supplies RWL 100, the industry-proven 36% polystyrene latex, as well as n full line of acrylic polymers. Phone or write today for a test sample and full technical details.



MORTON CHEMICAL COMPANY

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Chicago 6, Illinois

Financial 6-6760

(From Page 107)

advertising is closely tied up with the success of its product development activities.

Furthermore, when a company is confident of its ability to acquaint the public quickly with a product advance, it is more willing to invest dollars in the research which is needed to bring that improvement from the laboratory to the consumer.

In this way, advertising and scientific research have come to work hand-in-glove on a vast and amazingly productive scale. No other form of consumer selling has yet demonstrated this ability to foster product innovation. The direct beneficiary is the consumer, who enjoys an ever-widening selection of better products and services.

8. All of these points bring me logically to still another one which is so obvious to us who know advertising that it often goes unexpressed.

It is that advertising increases competition.

Many of us here can remember in the 1930's and early 1940's when advertising was frequently criticized in academic and governmental circles for being wasteful, ineffective, and parasitical. One of the purposes for starting the Advertising Council was to demonstrate the effectiveness of advertising to people in government by using it in public service causes.

Today, the pendulum has swung to the other extreme. Advertising is now being criticized for being too effective. It is so effective, we are told, that it may lead to monopoly and restraint of competition.

This criticism is most certainly based on a misunderstanding because one of the most fundamental characteristics of advertising is that it *forces* one to be competitive.

It seems to me that a recapitulation of what I've already said covers this point. For example —advertising will not work effectively if the product is not fully competitive in quality. This forces constant competition through product improvements.

Advertising will not work effectively if the product—quality considered—is not fully competitive in price. This forces constant competition through cost reduction programs.

Advertising will not work effectively unless the sales and other distributing functions are on their toes. This *forces* competition through vigorous competitive selling and merchandising.

Any company with a new product idea can through advertising tell the world about it in short order. This opportunity spurs competition through the creation of new products. This in turn means that established products must improve in order to live.

The very essence of advertising is that it is an instrument of competition. If one believes in competition—and we surely do—it is hard not to believe in advertising. To our mind it is completely irrational and certainly (Turn to Page 113)

ODRENES* take the guesswork out of household product fragrance selection!

When you use an Odden to seent your household product you can be sure of a competitive selling advantage. For every Odden is consumer-tested and accepted as a pleasing modern fragrance. You take no chances on its appeal!

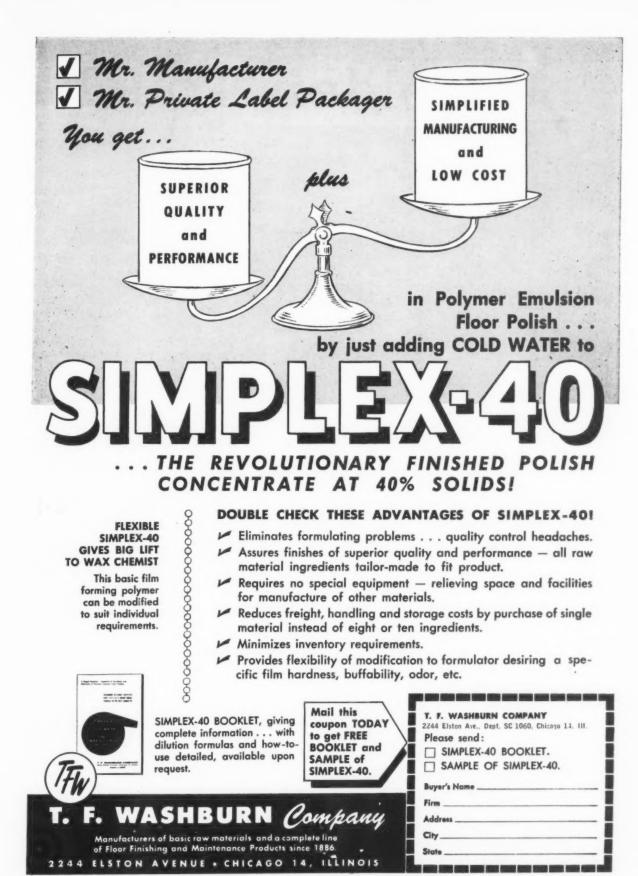
You can also be sure of its technical performance in your product. For Odden is secientifically compounded to solve the unique problems of household products. They are versatile, easily adapted to the special requirements of your formulae, stable, and extremely economical to use.

May we demonstrate how these fragrances can solve your odor problem? Write for samples and the full cooperation of our technical staff.

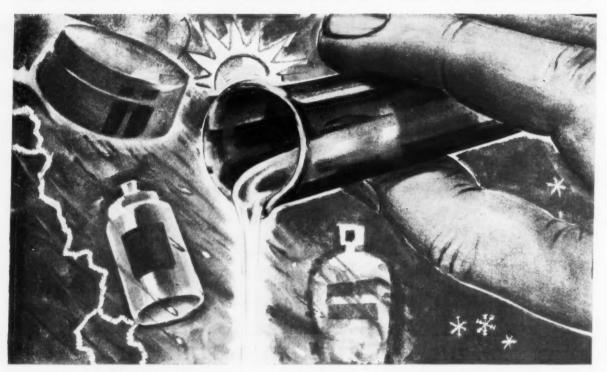
Odrens is the registered trade-mark for Sindar's series of fragrant additives.

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The Golden Touch!



That's What Silicones Add To Your Polish Sales and Profits

Dow Corning Silicones make polishes easier to use — faster to apply . . . quicker to shine-up . . . give a richer, deeper gloss. And because silicones resist weathering and oxidation, they just naturally last longer, provide greater protection.

These qualities mean polishes that please the consumer — a better product image for you. That's why you're wise to formulate your polish with Dow Corning Silicones . . . to feature "Silicones" on labels and in your advertising. When you do this you're developing brand loyalty and, at the same time, putting the extra touch of gold into your polish profits.

Dow Corning is a company formed specifically to concentrate its research in the field of silicone chemistry . . . to develop and produce these new materials to serve industry. That's why our chemists constantly work to provide polish manufacturers with the latest technical data and information on the use of silicones in polishes . . . to help you improve existing products or develop new polishes for the market.

Furthermore, conveniently located warehouses and prompt shipment of your silicone needs means Dow Corning is in the best position to help maintain efficient inventory control.



Put yourself in her place and you'll formulate your polish with silicones.



For more detailed information about the use of silicones in polishes, phone our office nearest you or write Dept. 8410.



Dow Corning CORPORATION

MIDLAND, MICHIGAN

ATLANTA BOSTON CHICAGO CLEVELAND DALLAS LOS ANGELES NEW YORK WASHINGTON, D. C.

(From Page 110)

contradictory to be for competition and against advertising.

9. The fundamental points about advertising which I have been discussing also help provide an answer to one of the chief current arguments against it. That argument goes about as follows, and I'll try to summarize it as fairly as I can:

Advertising is a poor way to allocate a nation's resources. It directs the nation's resources to those consumer wants that can only be satisfied by commercial products and services. Other consumer wants, such as education, hospitals, highways and urban reconstruction – all of which are said to fall in the "public sector" – are thus neglected. Therefore, our economy is not as well balanced as it ought to be.

I am not one to sneer at the proponents of this argument, for they are doing a service in directing attention to one aspect of our economic life that requires a lot of thought. All of us are vitally concerned about schools, hospitals, highways and the problems of urban blight. I personally have spent a considerable portion of my time on such matters for many years. I have read the development of this argument sympathetically; I have thought a great deal about it: and I'd like to offer these comments:

a. First of all, it ought to be pointed out that this country now has the best schools, the best equipped hospitals, the finest housing and the most extensive highway system in the world. What's more, our rate of providing all these things has been stepped up enormously in the past decade when one considers both private action and governmental action at the local, state, and federal levels. I'm not saving that there isn't room for or a need for further improvement. I'm just saying that we should recognize what has been accomplished-and is being accomplished - to keep the picture in proper focus.

b. Secondly, it should be pointed out that these items which are said to fall into the "public sector" have plenty of pressures behind them. If, as is said, advertising tends to put pressure behind commercial products and services, our political system tends to put a great deal of pressure behind the noncommercial items. In fact, much of our political mechanism in this country seems to exist for the purpose of detecting, arousing, and satisfying people's wants. Some of our politicians appear to make a career out of telling people what they should want and then offering to get it for them. What's more, the media of the nation are available for this purpose-usually without charge.

I am not implying all this is wrong. I am merely saying that there is a balancing factor to the pressure behind the commercial products. The balance may not be everything that some people think it should be, but by and large the people of this country get from the government as well as from private manufacturers just about what they want.

c. Once we depart in any substantial way from giving the people the opportunity to decide for themselves what they want, I really do not know who in government or what government procedure is wise enough to "allocate" the nation's resources in the people's best interests.

In the Soviet Union, incidentally, the government put massive sports arenas, subways with crystal chandeliers, and vast and elaborate exhibit buildings for propoganda purposes ahead of housing needs of the people. In Russia also the national government had to issue an edict directing architects to make their buildings less ornate so that they would be less expensive to build and maintain. The architectural results were not something to be desired. For myself, I'll swallow occasional "tail fins" on automobiles to give free rein to design.

d. Above all, I believe there



MAGNADOR

No. 41 MM&R

Water-Soluble Space Deodorant

Banishes Unpleasant Odors in a Few Seconds

- Replaces unpleasant odors with a clean, fresh, almost imperceptible fragrance
- All purpose deodorant. Overcomes odors associated with . . .

Cats and dogs, dead rats, garbage receptacles, hospitals, kitchens, laundries, musty places, state tobacco smoke, toilets, veterinary establishments, and many others

- Easy to use: In wick bottles, in open pans, as a space spray, in scrub water
- Supplied in bulk only. Dilute with water for use
- Most economical

Literature and price list available on request.



MAGNUS, MABEE & REYNARD, INC.

Since 1895 . . .
The World's Most Famous Supplier of Essential Oils and Concentrated Flavors 16 Desbrosses Street, New York 13, N. Y.



made for your special odor problems

Our long experience in the fields of:

MANUFACTURING

SINCE

CHEMISTS

CTURING

Petroleum Products

Paints and **Varnishes**

Insecticides and Repellents

Household Cleaners

- enables us to "FIT OUR MASKS TO YOUR PROBLEM"



Write Maskols -

5 WILLIAM STREET BELLEVILLE 9, N. J.

is room in this country for the full play of private initiative plus whatever is needed for such things as education and medical care. If there isn't room for both-all arguments are off as far as I'm concerned. But I think definitely there is room for both, and I think it is essentially a backward philosophy to argue that private endeavor must be curbed so that the government can "allocate" more of the resources of the nation in the way it thinks is best for the people.

e. Finally, let us recognize that the selling and distribution complex of this country, of which advertising is an essential part, is one of the most ingenious ever contrived by man to give vigor and drive to an economy. Let's recognize also that this vigor and vitality in our economy are what make it possible for us to provide whatever we need to remain the first nation of the world in such matters as education, hospitals, highways, urban renewal, and what have you.

We who know the practical workings of advertising all have a job to do. It is incumbent on all of us to see that plausible, wellintentioned, but misleading philosophies are not allowed to sap the great vigor which advertising injects into our economic system. One way to do this is to make sure that advertising is more widely understood. Indeed it is too vital a factor in the economic life of this country not to be broadly understood. I hope that in some small way my discussion of it this evening will contribute to such an understanding.

New Surfactants

(From Page 54)

Detergent bars, on the other hand, will make further inroads into soap use, and will boost overall production and consumption of detergents. The toilet bar soap market is a sizable one, of approximately a half billion pounds consumed per year.

M. ARGÜESO & CO. INC.

MAMARONECK REFINED

Importers—Refiners

CARNAUBA **OURICURY** CANDELILLA

Crude - Refined Bleached-Flaked-Powdered

BEESWAX

Crude Refined Bleached Substitutes

MANUFACTURERS



SPECIAL WAXES **OZOKERITES** CERESINS PALM WAXES CASTING WAXES RESIN BLENDS

Compounding to your specifications

M. ARGÜESO & CO. INC. 441 WAVERLY AVENUE MAMARONECK, N. Y.

Owens 8-8500 Cable address: MARGUESO PETERSON FILLS
AND AFROSE.

A Complete
Packagina

Service That Can Mean Important Freight Savings To You ...





AEROSOLS ...

filled by efficient, accurate, high-speed pressure or cold-filling methods with halocarbon or hydrocarbon propellants (or a combination of both).

LIQUIDS ...

filled in metal, glass or plastic in any size from 2-ounce containers to 55-gallon drums.

And when your products

must be sent to common destinations in different types of packages, Peterson can do all the filling and, then, combine the various types into dollar-saving single shipments. For complete details, write, wire or phone ...





We don't specialize in answering dreams for size 12 figures, but we do specialize in creating the glass containers of your dreams. Manufacturers of household chemicals make life easier for millions of women — and we try to do just that for all our customers. Envision a whole company concentrating on getting you what you want — where you want it. Envision a streamlined service where modern plants, strategically located, are geared to meet your specific production requirements. Envision the best — that's Metromatic!

MANUFACTURERS OF QUALITY GLASS CONTAINERS



DIVISION NATIONAL DAIRY PRODUCTS CORPORATION GENERAL OFFICES: JERSEY CITY 3, NEW JERSEY

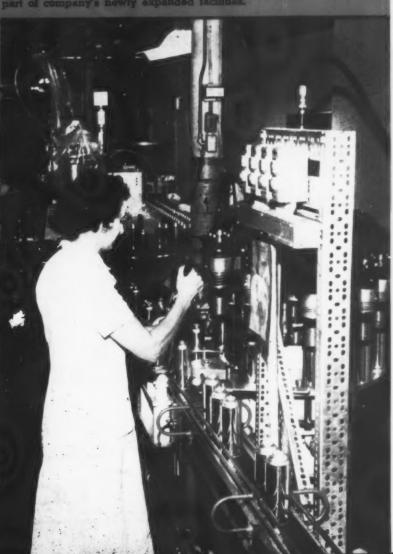
Packaging...

AEROSOLS - LIQUIDS - PASTES - POWDERS

Bridgeport. Conn., contract aerosol loader, checks crimp dimensions on automatic evacuator crimper which is integral part of company's newly expanded facilities.

Automotive Cleaners Detergents Deodorants Disinfectants Floor Products Insecticides Laundry Bleach Metal Cleaners Moth Products Polishes Shampoos Shave Products Soaps Liquid Starch Toiletries and other Chemical Specialties

A market for over 28 billion packages annually





for that captivating look CELANESE ROYAL PLASTIC CONTAINERS...

Your number one supply source for custom-designed and stock shapes. Celanese Royal Packaging Service includes: expert technical assistance with container design . . . mold design and construction . . . plastic selection ... labeling. For complete information on custom or stock containers, write: Celanese Plastics Company, Royal Container Department, 744 Broad St., Newark 2, N. J. • Plants: Trenton, N. J. • Chicago, Ill. • Prescott, Ariz.

packaging notes

O-I Shifts Francis

Thomas R. Francis, manager of the Toledo sales branch of the glass container division of



Thomas R. Francis

Owens-Illinois Glass Co., Toledo, recently has been assigned to the division's New York branch as manager of glass container sales to the drug and chemical industries.

Mr. Francis, who served in Toledo two years, joined Owens-Illinois 10 years ago, serving most of that period at the company's Chicago sales office.

New Can Company

Establishment of Rose Can Co. in Bayonne, N. J., for the manufacture of a complete line of tin cans and steel pails was announced late last month. The new concern produces all types of tin and steel containers, with plain or lithographed exteriors.

The New York, New Jersey and Philadelphia metropolitan areas will be served by Rose service. Operations were begun September 1.

Edward Rose, president of the new firm, is the grandson of Hyman Fein, founder of Fein's Tin Can Co., Brooklyn. For the past 10 years, he was sales manager of Fein's printing ink container division. The plant is located at: Foot of E. 46 St., Bayonne, N. J.

Continental Ups Two

James K. Cooper has been appointed district sales manager for metal cans in Atlanta, by Continental Can Co., New York, according to an announcement made last month by D. B. Wiesley, general manager of the southeastern district.

P. N. Smith succeeds Mr. Cooper as product sales manager in New York. Mr. Smith was previously assistant product sales manager in the industrial and household group, responsible for cans that package aerosol products, anti-freeze and hydraulic fluids.

Metro Names Thayer

John W. Thayer was named marketing manager last month by Metro Glass, Jersey City, N. J., division of National Dairy Products Corp. Expansion at Metro created a need for a new marketing department which Mr. Thayer will organize and direct.

Mr. Thayer was formerly general sales manager of the Hazel Atlas division of Continental Can Co. Before that Mr. Thayer was eastern regional sales manager of Owens-Illlinois Glass Co.

John W. Thayer



Bradley-Sun Ups McCarthy

Appointment of Richard H. McCarthy, Jr., as vice-president in charge of sales for the Bradley-Sun



Richard H. McCarthy, Jr.

division of American Can Co., New York, was announced last month by C. L. Alexander, vice-president in charge of division operations.

Mr. McCarthy, who has been director of sales for the past 15 months, is responsible for the sale of collapsible metal and plastic tubes, plastic squeeze bottles, aluminum impact extrusions, and other division products.

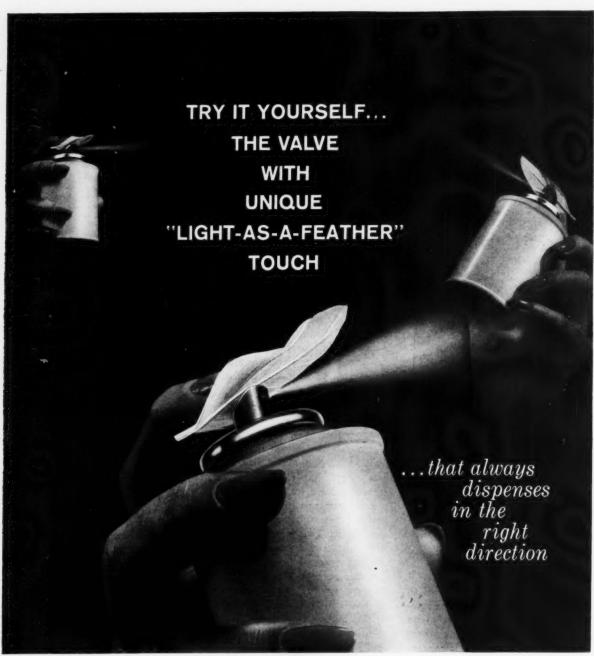
He joined Sun Tube Co., a predecessor company, in 1955 as a product manager in sales, after sales experience in other fields. Later Mr. McCarthy transferred to production work as manager of the division's Washington, N. J. plant.

Plastic Container Plant

Operation of a new blow-molding plastic container plant of Eclipse Plastics Industries, Inc., Milwaukee, Wis., which specializes in sizes from 55 gallons down to one quart, was expected to have started on October 15.

A new type of blow-molding machine, said to be the first and only one of its kind, will

(Turn to Page 132)





Meet experienced engineers in the Aerosol Valve Industry. ■ Talk with laboratory people who can help analyze your product. ■ Learn the value of a century-old tradition of quality. ■ See up-to-the-minute production facilities. ■ In short . . . MEET SCHRADER . . . and see for yourself.



Aerosol Valves

A. SCHRADER'S SON, Division of Scovill Manufacturing Company, Inc., 470 Vanderbilt Ave., Brooklyn 38, N. Y.



"Consistent uniformity is one reason we use Knox," says leading household products manufacturer

"Uniformity of size, along with strength and quality, make up the three essential elements we demand in our glass bottles," says the Supervisor of Bottling of one of the nation's foremost manufacturers of liquid household cleaners and other consumer products.*

"Knox Glass, Inc., has been furnishing us this high caliber glass for a period of twelve years now, and its breakage rate, as it goes through the various steps of unloading, conveyor transportation, filling, capping, labeling, case packing, and shipping is so low as to be negligible, actually amounting to less than 1%.

"But consistent manufacturing to our exact specifications is probably the thing we stress most. The wrong-sized bottle — any deviation from specs — can play havoc with our production lines. Knox uses our molds and has, evidently, mastered the art of obtaining proper glass distribution — we have neither breakage nor size problems with their bottles."

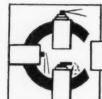
Find out how the new/Knox Glass can serve you — consistently. Contact Knox Glass, Inc., Knox, Pa., or any one of 37 sales offices.

*Name available on request.

the new/knox glass

CONTINENTAL FILLING CORPORATION CAN FILL YOUR AEROSOL REQUIREMENTS

> Continental Filling Corporation has the facilities, the know-how, the ability to pressure package your product, no matter what your requirements. See for yourself . . . write Continental Filling Corporation today for full information and brochure.



CORPORATION

Danville, Illinois

Better Packages Help Click Chemical Boost Sales 22% in First Eight Months

N increase of 22 per cent in sales of its line of moth control and deodorant products for the first eight months of 1960 was announced in mid-September by Peter I. Clough, president of Click Chemical Corp., Mount Vernon, N. Y.

Millard Fisher, Click general manager, attributes much of the growth in sales volume to the wide acceptance of new and novel packaging of Click's line of paradichlorobenzene and naphthalene products. These new packages, adopted earlier this year*, incorporated a number of departures including the adoption of cardboard containers for para and naphtha products sold through food and non-food outlets. The cardboard containers, with a clear film overwrap, offer protection to such products as deodorant blocks not available in the cellophane envelopes which they replaced.

Another factor materially aiding Click's 1960 sales surge was

the establishment this past spring of a new subsidiary corporation, Click Southern Chemical Corp. in Atlanta, Ga. What is also remarkable about the substantial sales increase recorded by Click in the January — August period of this year is the fact that it was made at a time when there was an acute shortage of naphthalene resulting from the prolonged steel strike.

To solidify and expand the gains registered by Click during the 12 years of its existence, the firm is devoting more and more of its attention to the design and adoption of more effective pointof-sale merchandising aids. As part of these plans, Click has already developed a new dump-bin floor display for its jumbo size para deodorizer for garbage pails, toilet bowls, hampers and diaper pails. A self shipper, printed in white, yellow and green, the new unit was manufactured and designed for Click by Liberty Corrugated Container Corp., 40 Metropolitan Ave., Brooklyn, N. Y. Each shipper contains 12 dozen, four-ounce de-



New Click Chemical dump-bin floor display for jumbo size para deodorizer blocks. Base is carboard shipper into which display fits.

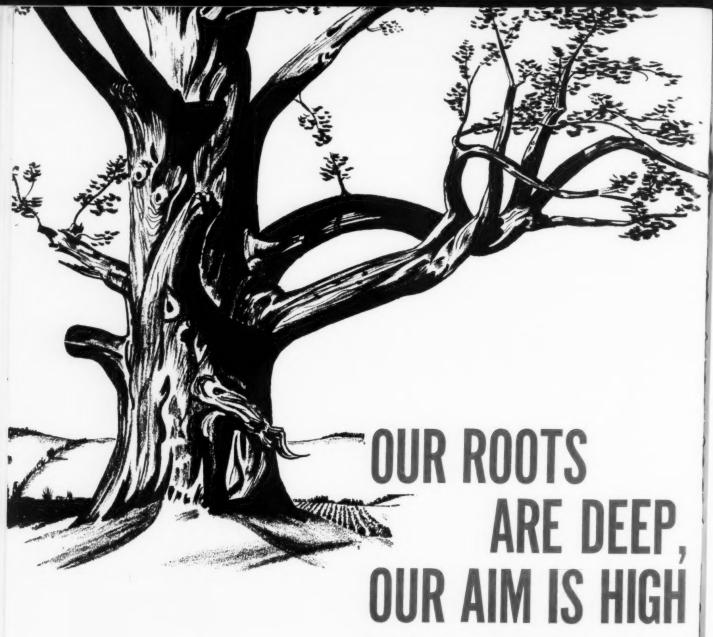
odorant blocks. The display is 4½ feet high, one foot deep, and 14½ inches wide. The brown corrugated base, into which the white corrugated dump-bin display fits, is 17

"See "Packaging is Key to Para Profits for Click Chemical," Soap & Chemical Specialties, February, 1960.

New Apple Blossom and Lavender fragrance containers, which Click has just introduced as companion items to

Cedar Pine para-closet deodorizer package. All three feature die-cut openings that display product.







Some fifteen years ago, the aerosol industry was born. Shortly after, the Precision Valve Corporation began. As the industry grew, Precision did too, in research, in discovery, in development.

Today, with over 500 employees and more than 60,000 square feet of manufacturing space devoted to over 10,000 different combinations of specifications for aerosol valves, Precision works with the industry to create and develop new aerosol designs to improve current procedures.

Now, on the threshold of further expansion, Precision rededicates itself to serving the aerosol industry and its customers. A major portion of Precision's new plant program will be directed toward research and development; its modern production facilities further improved; its friendly hand extended and dedicated to helping everyone.

Yes, Precision's roots are deep . . . its aim high!



inches high, and the bin 16 inches high. A riser, carrying information on product uses and a price spot, slides down into the bin during shipping.

The two newest additions to the Click product line, to be announced shortly, are paradichlorobenzene closet deodorizers in Apple Blossom and Lavender fragrances. For packaging these two new items, Click has employed again an idea it used in designing the package for its Cedar Pine para-closet deodorizer. For that product, and the two new ones, Click has had Philip H. Dickstein of New York work out a package that describes graphically its contents. In addition to "telling and selling," the package serves its normal function of protecting its contents, and also acts as a dispenser. This latter feat is accomplished by the use of a riser at the top of the package. The riser, part of the package itself, is designed with a die cut hole mid-way between the two sides. Rack jobbers can use the hole for their displays, while a tassled cord enables the package to be hung in the closet of the user.

The Lavender package, for example, features an overall old lace design and circular die-cut openings, through which can be seen the deodorant blocks which are wrapped in transparent lavender film. The overall color scheme of the package is lavender, yellow and black.

New Apple Blossom deodorant blocks are packaged in a container that is printed in dusty pink, deep aqua and green. The package has floral type die-cut openings through which transparent pink foil wrapped blocks are visible.

Click Chemical Corp. was acquired about 10 years ago by Millard ("Bob") Fisher, an exsalesman for the Barrett Division of Allied Chemical. He has since sold his interest in the firm to Peter I. Clough, and remains as general manager.

Click occupies two buildings at 601 S. Columbus Ave., Mount

Vernon. They provide about 17,000 square feet of floor space for offices and manufacturing operations. In addition Click has its newly established subsidiary in Atlanta.

Products of Click Chemical Corp. are sold nationally through manufacturers' representatives and food brokers. Retail sales are mainly through syndicate stores and supermarket chains.

Institutional and industrial sales of Clock products are handled by sanitary supply jobbers. Click has a special department for sales of this type. The Click line is sold under the firm's own brand and is also available under private label.

Monroe-Danford Moves

Monroe-Danford and Co., Weehawken, N. J., recently moved to new offices at 974 Blvd. East, P. O. Box 807, Weehawken, N. J. Formerly, the company was at 50-48 St., Weehawken.

In Southwestern Post

Donald W. Rucks, formerly assistant manager of the order department of Vulcan Steel Container Co., Birmingham, Ala., was recently appointed manager of the order department of Southwestern Steel Container Co., Dallas. Southwestern and Vulcan are subsidiaries of Vulcan-Associated Container Companies, Inc. Birmingham.

Southwestern is one of seven plants operated by Vulcan-Associ-

Donald W. Rucks



ated to produce steel containers for the chemical specialties, chemical, paint, petroleum and food industries.

Canadian Packaging Show

The ninth annual Canadian National Packaging Exposition will run November 1-3 in the automotive building at the Canadian National Exhibition's grounds in Toronto.

Although new types of packaging materials will be introduced by some of the 170 exhibitors, more stress will be placed on new applications for some of the early packaging materials, such as glass and corrugated cardboard. Working demonstrations of new packaging machinery, static exhibits of finished packs, materials, and point-of-purchase displays will be exhibited.

O-I Glass Ups Two

Owens-Illinois Glass Co., Toledo, Ohio, announced last month that C. G. Bensinger, executive vice-president, was appointed a member of the management committee of each of the company's nine operating divisions. It was also announced that R. H. Mulford, former president of the Kimble Glass Co. subsidiary, assumes responsibility for operations of the eastern glass container division, the Pacific coast division, and the closure and plastics division.

Mr. Bensinger has been president of the glass container division since 1956.

Mengel Co., CCA Merge

An agreement for the statutory merger of Mengel Co., Louisville, Ky., into Container Corp. of America, Chicago, was adopted last month by CCA's board of directors with the recommendation that the firm's shareholders approve the merger at a special meeting to be held on November 7. Mengel's directors took similar action on September 21. The merger becomes effective after approval by holders of two-thirds of the shares of each company.



DOUBLE-SEALS

DRUM LINERS * BAGS * CARTON LINERS

ALL STYLES . ALL SIZES

Produced with this materials.

LYETHYLENE, POLYPROPYLENE, VINYL, LAMINATES

The largust manufacturer in the U.S.A.

Someontrating on ROUND better and

STRAIGHT bettern LINERS . . . the FINEST?

OW, LOW, PRICES!





DOUBLE-SEAL Round & Straight

SUCCESS!

*"TWIN-SURE" DOUBLE-SEAL

straight bottom liners

*"DOUBLE WELD" POWER SEAL

round bottom liners

ALSO BACS LINKED ON ROLL:

Write Dept. SCS-100

CORPORATION PROTECTIVE LINING

GENERAL OFFICES AND PLANT: 22 WOODHULL STREET, BROOKLYN 31, NEW YORK

new trade marks

THE following trade marks were published in recent issues of the Official Gazette of the U.S. Patent Office in compliance with section 12 (a) of the Trade Mark Act of 1946. Notice of opposition under section 13 may be filed within 30 days of publication in the Gazette. See rules 20.1 to 20.5. As provided by section 31 of the Act, a fee of \$25 must accompany each notice of opposition.

CI-This for copper brighteners. Filed Mar. 23, 1959 by MacDermid Inc., Waterbury, Conn. Claims use since Feb. 19, 1957.

Bestyet — This for household soap and detergent. Filed Apr. 10, 1959 by Food Brands, Inc., Concordia, Kans. Claims use since Oct. 1952.

Neocura-This for antiseptic incorporated in soap and hand cream. Filed Dec. 10, 1959 by Potter Drug & Chemical Corp., Malden, Mass. Claims use since Dec. 4, 1959.

Fair Lady-This for liquid detergent for household use. Filed Jan.

25, 1960 by Deltex Industries, New York. Claims use since Oct. 26, 1959.

RichFoam — This for flexible urethane foams. Filed Dec. 22, 1959 by E. R. Carpenter & Co., Attleboro, Mass. Claims use since Sept. 1, 1959.

The Janitor in the Drum—This for construction how learner disingustration of the construction of the constructi

The Janitor in the Drum—This for concentrated bowl cleaner, disinfectant and detergent-disinfectant-deodorant, sold primarily as disinfectants and deodorants with incidental cleaning properties. Filed Apr. 28, 1958 by Texize Chemicals, Inc., Greenville, S. C. Claims use since Dec. 1956.

Dual Bright 35 — This for brightening agent for aluminum and

brightening agent for aluminum and stainless steel with incidental clean-ing properties. Filed July 6, 1959 by Ross and White Co., Chicago. Claims

use since Apr. 26, 1959.

Gy-Vap — This for household deodorants. Filed by Geigy Chemical Corp., Ardsley, N. Y. Claims use since July 28, 1959.

July 28, 1959.

Gy-Fer—This for rust inhibitors. Filed Aug. 14, 1959 by Geigy Chemical Corp., Ardsley, N. Y. Claims use since July 28, 1959.

Enco—This for hydrocarbon solvents, rust preventives, corrosion inhibitors, and insecticides. Filed

Nov. 4, 1959 by Penola Oil Co., New

York. Claims use since Aug. 28, 1959. Gafac—This for surface-active compounds and compositions having wetting, emulsifying, foaming and/or detergent properties, Filed Nov. 12, 1959 by General Aniline & Film Corp., New York. Claims use since Oct. 1,

Bidette — This for disposable fibrous pads impregnated with a skin cleansing and deodorizing preparation. Filed Jan. 26, 1960 by B. T.

Babbitt, Inc., New York. Claims use since Apr. 2, 1955.

Lanosil-This for combinations of lanoline and silicones incorporated as an ingredient in a hand and skin lotion. Filed Jan. 19, 1960 by Bristol-Myers Co., New York. Claims use since Dec. 16, 1959.

Arcross-This for soaps, shampoos, and detergents for household use, Filed May 1, 1958 by The May Department Stores Co., 32 Louis. Claims use since Sept. 1, 1953.

Gy-Glass - This for cleaning compounds for domestic use. Filed Aug. 14, 1959 by Geigy Chemical Corp., Ardsley, N. Y. Claims use since July 28, 1959.

Kemkat—This for liquid clean-ers for automobile bodies, whitewall tires, chromium, and upholstery. Filed Oct. 16, 1959 by The W. E. Bassett Co., doing business at The Kemkat Co., Derby, Conn. Claims use since Apr. 13, 1959.

Linco—This for liquid detergent. Filed Oct. 16, 1959 by Linco Products Corp., Chicago. Claims use since 1956; on cleaning compounds, Dec. 1928.

Diversey -- This for granular metal phosphatizing compounds, various granular and liquid compounds used in plant and building maintenance, for water, oil, and grease absorbents, bottle-washing and cleaning of utensils and equipment by farms, hospitals, hotels, schools, other in-stitutions, dairies, bakeries, brew-eries, food plants, beverage plants, and in food serving operations, Filed Dec. 3, 1959 by The Diversey Corp., Chicago. Claims use since Jan. 21,

Odor-Aire "The House of Protection"—This for perfumed and unperfumed paradichlorobenzene in periumed paradichlorobenzene in block and crystal form for use as an insecticide, mildew preventive, in-sect repellent, disinfectant, and de-odorant. Filed Feb. 7, 1958 by Odor-Aire, Inc., Wichita, Kans. Claims use since Oct. 8, 1957.

Chases Mildew-This for chemical composition for treating surfaces prevent and curtail mildew and mold rot, packaged in aerosol bomb and applied by spraying directly therefrom. Filed Sept. 2, 1958 by Chase Products Co., Broadview, Ill. Claims use since May 2, 1958.

Dandelin Deam This form

Dandelion Doom — This for herbicide. Filed Mar. 11, 1959 by Howard A. Chittick, doing business as Fairfax Biological Laboratory, Clinton Corners, N. Y. Claims use

Clinton Corners, N. Y. Claims use since August 1956. Doom — This for herbicide. Filed Mar. 11, 1959 by Howard A. Chittick, doing business as Fairfax Biological Laboratory, Clinton Cor-ners, N. Y. Claims use sirce August,

Atlas-This for chemical solutions for use in removing ice from automobile windshields and windows and sold and distributed through automobile service stations. Filed Nov. 20, 1959 by Atlas Supply Co., Newark, N. J. Claims use since Oct. 31, 1959.

Can't Miss-This for laundry starch marketed in pressure contain-ers. Filed Mar. 15, 1960 by Donald E. Lawrence, doing business as Can't Miss Co., Montclair, Calif. Claims use

Miss Co., Montclair, Calif. Claims use since June 24, 1959.

Everseal-Corrosium — This for anti-corrosive paint. Filed Jan. 28, 1960 by Everseal Manufacturing Co., Ridgefield, N. J. Claims use since Dec. 1, 1959.

SaniGard — This for alkylol-

amide condensate (surface protecting amide condensate (surface protecting agent) incorporated as an ingredient in a detergent. Filed Apr. 29, 1959 by Fels and Co., Philadelphia. Claims use since Apr. 5, 1959.

Puraphen—This for germicidal detergent. Filed Nov. 2, 1959 by Peck's Products Co., St. Louis. Claims use since Sept. 2, 1959.

Rustbeat — This for cleaning compounds and rust inhibiting chemicals for ferrous metal and surfaces.

icals for ferrous metal and surfaces. Filed Feb. 8, 1960 by Tower Oil Co., Chicago. Claims use since June 1959. Delvak — This for detergent composition, especially for cleaning

composition, especially for cleaning glass and metal containers and equipment. Filed Feb. 10, 1960 by Wyandotte Chemicals Corp., Wyandotte, Mich. Claims use sirce Jan. 4, 1960.

Declare — This for detergent composition, especially for washing dishes. Filed Feb. 10, 1960 by Wyandotte Chemicals Corp., Wyandotte, Mich. Claims use since Jan. 15, 1960.

Alkaway — This for paint removing composition. Filed Feb. 10, 1960 by Wyandotte Chemicals Corp., Wyandotte, Myandotte, Mich. Claims use since Jan. 13, 1960.

Wyandotte, Mich. Claims use since Jan. 13, 1960. Fx — This for compounds and

mixtures containing micro-organisms used for cesspool and septic tank liquefaction and cesspool drainage fields. Filed Oct. 19, 1956 by FX Lab. Co., Livingston, N. J. Claims use since

Jan. 1, 1955.

Quan-Sept—This for disinfectant and germicide for veterinary use.
Filed Dec. 11, 1959 by American Home Products Corp., New York, assignee of Fort Dodge Laboratories, Inc., Fort Dodge, Iowa. Claims use

since Nov. 27, 1946.

Aerotex — This for textile finishing agents, i.e., purifying agents, water repellents, softeners, fire retardants, and antistatic preparations, and accelerators for use the results are the results. taruants, and antistatic preparations, and accelerators for use therewith. Filed Jan. 14, 1960 by American Cyanamid Co., New York. Claims use since Apr. 26, 1940.

Dacthal — This for herbicide. Filed Feb. 9, 1960 by Diamond Alkali Co., Cleveland, Claims use since Oct. 9, 1959

Oct., 9, 1959. Monawet Monawet — This for surface active agents. Filed Feb. 10, 1960 by Mona Industries, Inc., Paterson, N. J.

Claims use since January 1953.

Monamid — This for surface active agents. Filed Feb. 10, 1960 by Mona Industries, Inc., Paterson, N. J. Claims use since March 1956.



Here's proof-by-Comparison

why more and more aerosol manufacturers are using NEWMAN-GREEN AEROSOL VALVES

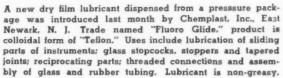
You get eleven major aerosol valve advantages—four are exclusives—when you buy Newman-Green valves. No other aerosol valve in the industry has all these features in a single valve. Creative Newman-Green, Inc. engineering produced this simplified valve design to help you in selling more aerosol products. Give us a call today and let our engineering services and aerosol valves help you in designing and manufacturing an even better aerosol product.

	designing and manufacturing an even better	Newman-C	Compar	Compan	Compar	Compar	Compar
1	Pressure fills fast because it does not fill through metering orifices.	1		V			
2	All metering orifices in spray head easily accessible for cleaning.	V	Exc	lusive No	ewman-G	reen Fe	ature
3	360° at spraying surface—twist top.	V	√		V	\checkmark	\checkmark
4	No small orifices drilled in metal parts.	V	Exc	lusive Ne	wman-G	reen Fe	pture
5.	Can be used on metal or glass containers.	V	V			\checkmark	V
6	Curved surface on spray button reduces finger fatigue.	V		√		\checkmark	\checkmark
7	Spray heads easy to apply after pressure filling.	V		,			V
8	Delivery tubes swedged on—not slipped over—valve body.	V	Excl	usive Ne	wman-G	reen Fed	iture
9	Excessive swelling of gasket not detrimental to operation of valve.	V				√	V
10	Spray pattern can be varied completely by changing only spray head.	V	Excl	usive Ne	wman-G	reen Fed	iture
11	No dissimilar metals used in valve parts.	V	V				

NEWMAN-GREEN

Creative Aerosol Valve Engineering
151 Interstate Road, Addison, Illinois







does not cake or drip and provides low coefficient of friction surface, according to the manufacturer.

New all-purpose liquid cleaner has recently been added to line of household chemical specialties made by Rose-X Chemical Co., Brooklyn. Quart bottle of new "Rose-X" cleaner retails for 49 cents. Bottle is by Owens-Illinois: Cap by Crown Cork & Seal. Rose-X Chemical also makes starch, bleach, ammonia and fabric softener.

WHAT'S NEW?

Carton for new golden "Fab" of Colgate-Palmolive Co., New York, is metallic printed paperboard. Produced by Packag-ing Corporation of America, Evanston, Ill., new "Fab" carton features use of metallic ink printing to cover large surface. This is believed to be pioneer use of metallic inks on folding cartons.

New counter display for "French Lilac" line of Allen B. Wrisley Co., Chicago. Display is stocked with "French Lilac" spray mist eau de Cologne and bubble bath. Latter product is packed in individual envelopes, 18 in a package retailing for \$1.25. Spray mist eau de Cologne in molded flacon is \$2.50.













CAPTIONS: THIS PAGE

Procter & Gamble Co., Cincinnati, is test marketing "Tide" in a new package form: "Redi-Paks" water soluble packets. Regular and "Queen Size" packages shown are being sold in Jacksonville, Fla. and San Diego, Calif.

New fluorocarbon slip and anti-stick agent, trade named "Rulon" was introduced recently in 6 oz. aerosol spray cans by Dixon Corp., Bristol, R. I. Spray provides low-friction, dry film, said to be chemically inert, insoluble, and thermally stable to over 500° F. Retails for \$2.50.

Gorham Co., Providence, R. I., silversmiths, recently adopted a polyethylene tube for its silver polish. White tube, printed in blue and red, is by Bradley-Sun Division of American Can Co., Hillside, N. J.

CRC "Soft-Seal" corrosion inhibitor is now available in 16-ounce aerosol package. Made by Corrosion Reaction Consultants, Inc., Philadelphia, product is also available in one, five and 55 gallon containers.

Four extra packets are included at no extra price, in newly designed gift box of "Wash 'n Dri" premoistened towelettes for hands and facial cleaning. Blue and white set-up box, that features flap lid, holds 40 packets and retails for \$1.75. Consumer products division of Unexcelled Chemical Corp., Canaan, Conn. is the manufacturer.

Burgeoning Italian aerosol line-up added six new names recently with introduction of three new aerosol sun tan preparations, a new hair cream and two insecticides. All six are packaged in one piece aluminum containers equipped with valves by Solfrene, S.p.A., Milan licensee of Risdon Manufacturing Co. in Italy and Germany. Solfrene also does the filling.

CAPTIONS, FACING PAGE

New "Party Date" spray cologne for the younger set has just been announced by Stanley Home Products, Inc., Westfield, Mass. Gold case, 4½ inches high, is decorated with butterfly design in pink, white and gold. Metered valve by VCA, Inc., requires no overcap, and locks into place by twisting top. Container by Peerless Tube; decorated by Metal Fabrications. Stanley does its own filling.

Allen B. Wrisley Co., Chicago, introduced early this month "Superbe" bubbling bath oil in glamorous, gold decorated, milk opal glass decanter, topped with golden flared closure. Product comes in three fragrances: "Forest Pine," "Petal Blossom" and "Blue Bouquet" to retail for \$1.00.

Two familiar Dr. Scholl's foot care products are now available in Italy in aerosol form. "Pedo-Spray" is applied inside shoes: "Deo-Spray" is used on feet as refreshing antiseptic deodorant. Both aluminum containers are fitted with valves by Solfrene, S.p.A., Milan, Italy licensee of Risdon Manufacturing Co., Naugatuck, Conn., in Italy and Germany. Solfrene also did filling.

"Florient" aerosol room deodorant is now available in an unscented form, it was announced early this month by Colgate-Palmolive Co., New York. Product is claimed to "destroy" rather than mask unpleasant odors. Retails for 794. Crown "Spra-tainer" holds 51/2 ozs. of product. Valve is by Precision and the overcan is Sterling's.









FOREST PINE





(From Page 119

produce extra large containers of high density polyethylene and other thermoplastic materials. Described as costing about \$250,000, the new machine produces round, square, or oblong shapes, and can complete a 55-gallon drum, the largest container contemplated at the present time, in 60 seconds.

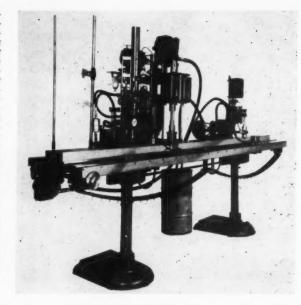
Suggested uses for the plastic containers are as: acid bottles, 55-gallon drums, and other industrial and commercial applications.

New 'Thin' Steel for Cans

A new type of "thin" tinplated steel for can manufacture was announced last month by United States Steel Corp., Pittsburgh.

Described as being light enough in weight to allow can manufacturers considerable savings in freight costs, the new plate is also said to make it possible to produce cans at lower than the existing cost for conventional steel

New aerosol filling machine designed particularly for loading paints and other messy" type products was an-nounced recently by Kurek Engiby Kurek Engineering Co., Madison, Wis. It is adjustable for can height by single crank which positions center tion on which 11 component heads are mounted. Additional compon-ents such as ball dropper, purger, valve feed, etc. may be mounted on center section without lengthening line. Product filler has no hopper or float ball to clean out.



cans. USS is said to be relying heavily on the new product to offset inroads made by aluminum in the can market in the past few years. Since aluminum costs even more than conventional tinplate for cans, the new product is expected to accentuate the advan-

tage steel enjoys over aluminum.

Fitment Applicator Data

A new automatic container fitment applicator is described in a catalog sheet that has become available from Resina Automatic Machine Co., 572 Smith St., Brooklyn.



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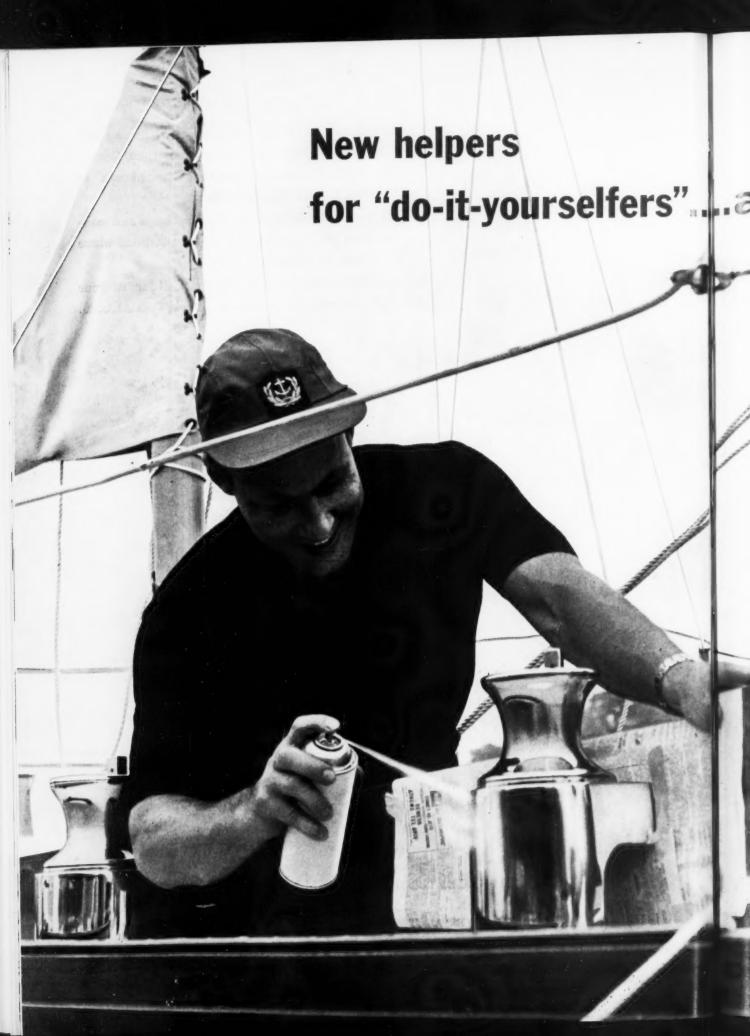
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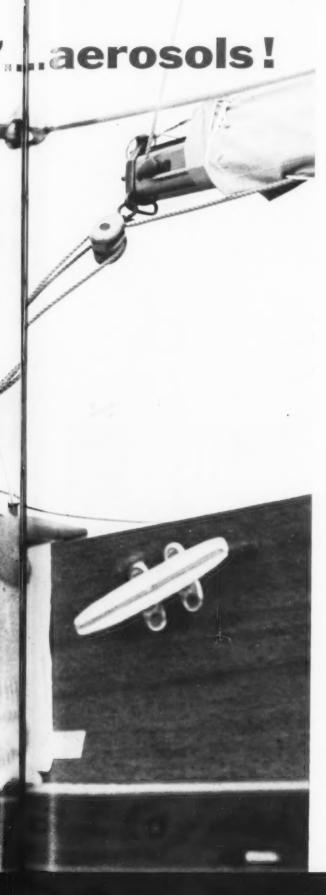


DURAGLAS CONTAINERS
AN (1) PRODUCT

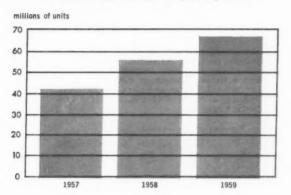
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*Estimated by Market Surveys Department, General Chemical Division, Allied Chemical Corporation

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VALVES

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pressure packaging

Ducey to Newman-Green

Newman-Green, Inc., Addison, Ill., aerosol valve manufacturer, recently announced appoint-



Fred B. Ducev

ment of Fred B. Ducey as sales correspondent. Mr. Ducey is responsible for customer inquiries and general sales liaison work. He is located at Newman-Green's headquarters in Addison.

Old Empire Acquires Firm

Old Empire, Inc., Newark, N.J., recently acquired the facilities of Garde Drug Co., Inc., Philadelphia, it was announced by John A. De Elorza, president of Old Empire.

Old Empire reports that the acquisition enables it to offer expanded service and facilities for the packaging of pharmaceuticals for the trade in powders, tablet, and liquid filling in Philadelphia as well as in Newark.

ATI Boosts Capacity

A figure of 85 million units, larger than the entire annual output of aerosols a few years ago, is what Aerosol Techniques, Inc., Bridgeport, Conn., expects its production potential to be upon completion of its latest expansion program at the main plant in Bridgeport.

Manufacturing facilities have been increased more than 50 per cent with the installation of an entirely new line including a 12-head vacuum crimper and a 12-head rotary pressure filler. The line operates at speeds of up to 150 units a minute, and handles all types of products, particularly large volume items.

ATI is stepping up its liquefied petroleum program, as part of the new line, following successful research and application by Western Filling Corp., the firm's California affiliate. ATI will be thoroughly tooled for two-phased systems and the aqueous-based products which are said to represent an increasingly important acrosol area.

Aerosol Lubricant

"Fluoro Glide," a new aerosol dry film lubricant, was introduced last month by Chemplast, Inc., East Newark, N.J. It utilizes a colloidal form of "Teflon" fluorocarbon resin produced by E. I. du Pont de Nemours & Co., Wilmington, Del., and is dispensed by "Freon" propellant.

According to Chemplast, "Fluoro Glide" leaves a smooth, quick-drying, and almost frictionless film of "Teflon", preventing freezing and abrasion of adjacent

Puritan Research Director

Theodore A. Thonet has been appointed research director of Puritan Aerosol Corp., Boston,



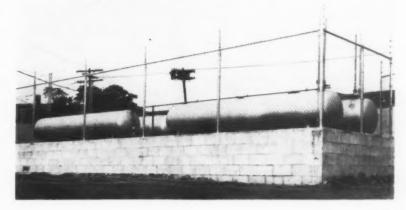
Theodore A. Thonet

it was announced last month by Harvey White, president. In his new post Mr. Thonet directs and implements Puritan's research and development operations.

Mr. Thonet was associate research director before his recent advancement. Previously he was research director of Continental Filling Corp., Danville, Ill. Author of several technical articles, he has applied for a number of aerosol patents.

surfaces. Described as non-greasy, dripless, and providing a surface

Battery of storage tanks installed recently by Aerosol Techniques, Inc., Bridgeport, Conn., for liquid petroleum hydrocarbon propellants.



with one of the lowest coefficients of friction, "Fluoro Glide" is inert to a wide range of chemicals and can be used through temperatures ranging from the very low to 600 degrees F.

The new lubricant is suggested for sliding parts of instruments, glass stoppers, reciprocating parts, threaded connections, and other household and industrial uses.

Hrebenak Strouse Rep.

Appointment of Paul Hrebenak as marketing representative for Strouse, Inc., Norristown, Pa., custom filler of aerosol products, was announced Sept. 30, by Frank Strouse, president. Mr. Hrebnak will maintain an office in Hanover, N. J. For the past five years he has been associated with Victor Metal Products, Chicago, as eastern representative, handling sales for its line of aluminum aerosol cans and tubes. Mr. Hrebenak is continuing to offer aluminum aerosol cans in conjunction with custom filling.

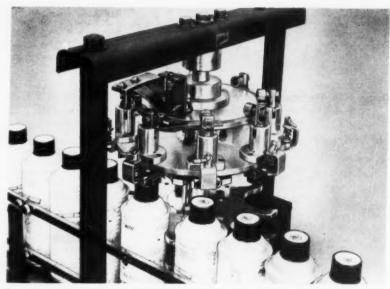
Before joining Victor, Mr. Hrebenak was with the New York office of Reynolds Metals Co. Earlier he had been employed in the production department of a contract packaging firm.

Redesigns Coder

Redesign of its Model TMT "Markcoder" conveyor line machine for imprinting codes, prices, etc. on tops of cans, bottles, jars and other basically cylindrical products, was announced recently by Adolph Gottscho, Inc., Hillside, N. J.

Straight-through travel of containers assuring smooth and uninterrupted product flow is possible as a result of improved design. Also, there is no need for cutting conveyors nor installing dead plates. Maximum speed, the maker says, is 1,000 per minute.

The new Model TMT "Markcoder" is self-powered, being driven by the product stream itself. Eight separate printing heads register imprints in the same spot on



Redesigned Model TMT "Markcoder" conveyor line machine of Adolph Gottscho Co., Hillside, N. J. for imprinting codes, prices, etc. on tops of cans, bottles, jars, etc.

each succeeding product. A novel cam-activated mechanism automatically compensates for products of widely varying heights. The coder accommodates rubber type and instant drying fluid inks suitable for any surface.

A new bulletin describing the imprinting machine is available from Gottscho.

New Plastic Overcap

A new, high impact polystyrene overcap, said to be designed to accommodate the highest aerosol push valves, was introduced recently by the Walter Frank Organization, Hillside, Ill., packaging engineers and designers.



Designated "No. 710," the new cap is said to have the rigidity and strength that make it ideal for fast, automatic capping. The cap is made to fit the body diameter of three-piece acrosol cans and is equipped with a full internal ring which fits over the top of the mounting cup.

The cap is quantity-stocked in black and white and is also available in a wide variety of colors.

'Genetron' Plant Head

The General Chemical Division of Allied Chemical Corp., New York, announced early last month that Charles A. Raymond is now superintendent of the Danville, Ill., works. He succeeds Francis V. Toppin, who was named area superintendent of General's Baton Rouge, La. works.

The Danville works manufactures "Genetron" fluorinated hydrocarbon aerosol propellents and refrigerants.

ATI Internal Newspaper

Aerosol Techniques, Inc., Bridgeport, Conn., announced last month that "Aerosolette," an internal newspaper for employees, is now being published. It is believed to be one of the first employee (Turn to Page 140)

contract filling/private label guide



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(From Page 138)

newspapers in the pressure packaging field. The subject of the first article was John H. Breck, Inc.

New R. C. Can Plant

R. C. Can Co., St. Louis, started operations last month at a new 75,000 square foot fiber can plant in an area called the Great Southwest Industrial District, midway between Dallas and Fort Worth, Tex. The air-conditioned structure is the seventh plant for the firm, bringing its total production and office space to three million square feet.

Recently introduced by Dorothy Perkins, Inc., New York, is "Roses of Gold" aerosol dispensed perfume. Two ounces of product are packed in refillable metal case supplied by Bridgeport Metal Goods. Uncoated glass bottle in metal case is mode by Foster Forbes Glass Co., Marion, Ind. Wheaton Glass Co., Millville, N. J., supplies coated refill bottle. Powr-Pak, Inc., Bridgeport, Conn., is the loader, and the B-18F metered valve is by VCA, Inc., Bridgeport, Conn.



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New Valve Attachment

A new metered attachment for 20 mm. standard aerosol valves was introduced last month by Emson Research, Inc., Bridgeport, Conn. The device is intended for controlled dispensing of oral dosages from glass bottles or stainless steel containers.

Made of "Super Dylan" plastic, the new oral attachment is claimed to be dust and leak-proof. To use the device, the top of the unit is removed and placed horizontally on the valve button. Pressure on the button activates the valve and at the same time directs the spray through the attachment into the mouth and lungs.

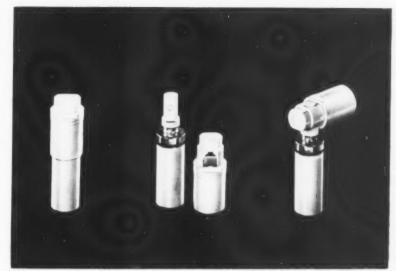
Emson makes the complete unit which consists of metered valve, stainless steel container and the attachment. It is suggested for use with any oral medicinal throat spray, mouth wash and breath freshener.

Mist Fills Short Run

The aerosol research laboratories of Mist Products, Inc., Box

A new, 3/4 ounce, purse size for "Touch and Set" hair spray was announced recently by Charmour Products, Inc., New York. Spray is loaded by Aero-Chem Fillers, Inc., Bridgeport, Conn., in container supplied by Peerless Tube Co., Bloomfield, N. J. "B8" valve and "B-Knight" button are from VCA, Inc., Bridgeport, Conn. Overcap is by J. La-Barb, Inc.





New metered attachment for 20 MM standard aerosol valves introduced recently by Emson Research, Inc., Bridgeport, Conn.

1756, Grand Central Station, New York 17, N. Y., recently announced that they are able to package in aerosol form small quantities of new or experimental formulations. In addition the firm will fill pressurized containers of chemical reagents used in chromatographic and other specialized analytical, clinical, or testing procedures. These services are available with no minimum quantity requirements, according to Frank S. Cook, sales manager. Mist may be reached by telephoning Defender 5-6222 or Independence 3-6875.

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Will mark top, bottom, or both at same time.

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CASE CODE DATER

with Kiwi built-in rubber band type.

- No loose type to become lost
- Ink just once per shift
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- Inker never dries out
- Prints in the same place on every case

Also . . .

case printers for consecutive numbering or printing information on cases

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aerosol patents

No. 2,947,451. Protective Cover for a Dispensing Valve Assembly, patented by Fred F. Suellentrop, Mehlville, Mo. Described is a protective cover for a dispensing valve assembly of the character disclosed, said assembly being mounted centrally in the closure member incorporated in the top wall of a pressurized container and consisting of a resilient grommet having a therewith cooperating tiltable generally tubular valve ating tiltable generally tubular valve stem extending therethrough, said grommet including a sleeve segment and an integral therewith neck segment that has a downwardly out-wardly tapered external periphery, said sleeve and neck segments projecting upwardly above the bottom wall of the closure member and said stem projecting upwardly above the top of the sleeve segment, the protective cover aforesaid comprising integrally in combination: a top wall merging into an outwardly flared cyl-indrical side wall that terminates at the bottom in a circular rim portion; the bottom in a circular rim portion; a tubular section depending centrally from said top wall and having an internal diameter slightly exceeding the largest external diameter of said stem; and an internal thread formation in the lower end portion of the tubular section, and thread formation in the lower end portion of the tubular section; said thread formation

being continuous and helically generated from a point coincident with the bottom edge of said section and having its thread crests slightly rounded, in consequence whereof when said cover member is manually pressed downwardly from above about the projecting portion of the valve stem until the bottom rim of the cylindrical side wall contacts the top wall of the container, the internal thread formation aforesaid of the tubular section will deform the ex-ternal peripheries of said grommet sleeve and neck segments into fric-tional threaded engagement therewith whereby to provide a hermetic seal about the valve stem, to obviate fortuitous displacement of said cover, and to simultaneously preclude tilting of said valve stem.

No. 2,949,243. Aerosol Valve, patented by Wilhelm Josef Raehs and Hans Rauchmann, both of Neustrasse 26, Stolberg, Rhineland, Germany. Claims cover an aerosol valve comprising a fixed stationary valve body, a valve seat defining an outlet pas-sage for the contents of an aerosol container to which the valve is at-tached, said valve seat being posi-tioned in sealing engagement with said valve body for movement upon

manual actuation to a position in spaced relationship to said body, and a movable diaphragm connected for movement with said valve seat, di-mensioned and positioned to be acted upon by the pressure in an aerosol container to which the valve is attached, to resiliently force the valve seat into sealing engagement with the valve body.

No. 2,949,373. Pressurized Polishing Composition, patented by Edward R. Kendall and Gerard W. Meister, Chicago, assignors to Simoniz Co., Chicago. The patent reveals a pressurized polish product consisting essentially of about 0.1-25 parts of a propellant that is gaseous at ambient temperatures and about 99.9atmospheric pressures and about 99.9-75 parts of a polishing composition, the polishing composition consisting essentially of: about 10-30% of finely divided abrasive; about 5-16% of a divided abrasive; about 5-16% of a wax; about 2-12% polydialkylsiloxane; about 40-75% of a hydrocarbon solvent; about 1-4% of an ethylene glycol monoalkyl ether having 1-7 carbon atoms in the alkyl group; and about 1-10% of an oleophilic amorphous thickener dispersible in said solvent, all said parts and percentages being by weight being by weight.

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U.S. HOFFMAN CAN CORPORATION, Brooklyn, N. Y. STerling 8-2200

COMMERCIAL CAN CORPORATION, Newark, N. J. STANDARD CAN CORP., Leetsdale, Pa.

No. 2,948,439. Reinforced Glass Aerosol Containers, patented by William S. Glover, Vineland, and Joseph F. West, Millville, N. J., assignors to Wheaton Glass Co., Millville. The invention claims a container adapted to contain a product under pressure to be dispensed in aerosol form comprising a frangible bottle having a discharge opening, said bottle having at least one linearly projecting ridge, a continuous sheath of elastically expansible plastic material freely overlying substantially the entire exterior surface of the bottle and secured to said surface in sealing engagement therewith only adjacent said discharge opening, said bottle having a plurality of spaced localized external projections underlying said sheath along said ridge and extending from and beyond the line of said ridge, to produce substantially point impact

New Stylized Overcap

A closure to complement high fashion design in glass aerosol containers has been developed by Walter Frank Organization, Hillside, Ill., package engineers and designers.

The new proprietary cap, molded in high impact polyethylene, features a reverse flair with a slightly concave top adding to its appearance while still leaving a good surface for price marking.

Designated "proprietary Item No. 60," the cap is made in clear polystryene as well as a full range of colors. Either of two internal diameter sizes are available to fit steel or aluminum mounting cups. The cap has been packaged in compact but complete sample kits for the convenience of advertising managers and packaging directors interested in trying the product with their glass aerosols.



location on said ridge, said sheath being elastically expansible by said pressure when released upon explosive fracture of the bottle, said sheath having tensile and tear strengths to withstand the initial explosive force and when expanded having tensile and tear strengths operable within the elastic limit of said sheath to confine and retain said pressure and the fracture fragments of the bottle, and said sheath having at least one vent therein operable upon expansion of said sheath to gradually exhaust said pressure therefrom while still retaining therein the fracture fragments of said bottle.

No. 2,947,126. Machine for Filling and Charging an Aerosol Container and for Sealing the Latter, patented by John Richard Focht, assignor to Precision Valve Corp., Yonkers, N. Y. Covered in this patent is an aerosol charging and sealing ma-chine comprising: means for supporting a container having a top opening with a valved cap loosely engaged therewith, a charging and sealing head provided therein with a chamber, means for imparting relative move ment between such a container and the head to engage the container with the head with the container opening registering with the head chamber, means to engage and lift the valved cap free from the container and thereafter return it into engagement therewith, means for injecting a predeter-mined measured charge of propellant into the head chamber and through said chamber and container top opening into the container while the valved cap is lifted free from the container to permit unrestricted passage of propellant into the container, means for sealing the valved cap to the container after it has been returned to engagement therewith, said means for injecting the propellant comprising a propellant source, a conduit leading from said source to the head chamber, a cylinder conected to said conduit, a piston within said cylinder, and means, synchronized with the other parts of the machine, for operating said piston to draw into the cylinder a pre-determined quantity of propel-lant from said source and then pres-sure feed said propellant to said head chamber.

Granted Aerosol Patent

A patent covering the use of nitrous oxide as a propellant for engine starting fluids in pressurized containers was granted last month to Charles P. Orr, president of Spray Products Corp., Camden, N. J., who assigned it to his firm. Patent No. 2,948,595 relates to the use of such a propellant with priming or starting fuel for gasoline or diesel engines.

Canadian patent No. 585, 008 which similarly protects Mr. Orr's invention was issued to him in October 1959 and has also been assigned to Spray Products.



OCTOBER, 1960

For information, write Dept. SCS-10



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Production...

EQUIPMENT

MATERIALS

PROCESSING

Liquid Detergent Formulation

Soup Plant Observer

New Patents

Products and Processes

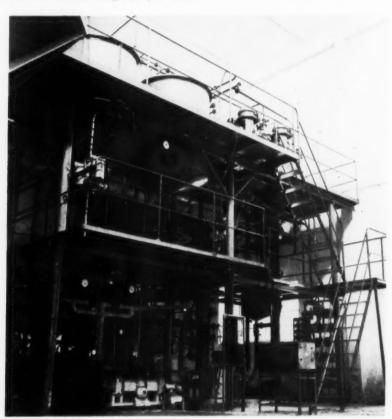
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General view of the continuous and automatic saponification plant for fatty acids.

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Very accurate control of the sodium chloride content in soap from zero to any required value

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PRODUCTION section

Liquid Synthetic Detergents

ROBLEMS encountered in the formulation of liquid dishwashing and laundering detergents are reviewed in a brief article by H. Manneck, published in the August 3, 1960 issue of Seifen-Oele-Fette-Wachse. Not included in the study are general purpose hard surface cleaning liquids and automotive liquid cleaners. Such products are usually combinations of cleaning compounds with solvents.

Formulation of satisfactory textile detergents in liquid form is frought with difficulties. Such liquids are expected to equal the powders in detergency. To achieve adequate storage stability in a liquid formulation of such high efficiency is the fundamental problem faced by the formulator. There must be no precipitation of detergent, salts, or other ingredients and no separation into two or more different layers. Furthermore, the oxygen releasing compounds, usually perborates, commonly present in detergent powders, are not stable in a liquid detergent with an alkaline pH.

To solve the problems inherent in formulating a liquid detergent containing about 20 to 25 per cent active a host of combinations has been suggested. In addition to the sodium alkylaryl sulfonates these suggestions include potassium salts of e.g. dodecyl-(propylenetetramer) -benzene sulfonic acid. Mono and tri-ethanolamine, ammonium, or isopropanolamine salts are used. Other candidates include furfuryl, hexyl, and trimethylamine alkylaryl sulfonates as well as morpholine and piperidine salts.

Meta, ortho, or para-xylol sulfonates, sodium, potassium or toluol sulfonates may be incorporated as hydrotropic substances. Benzene sulfonates, e.g. ethylbenzene sulfonates or mixtures of tetralin and isopropyl benzene sulfonates, may be incorporated in amounts ranging from three to 12 per cent. Additions of trialkylphosphates, e.g. triamylphosphate, as solubilization aids are also described in the literature.

So-called "triple" combinations contain as active detergent the lower or higher molecular alkylaryl sulfonates mentioned above plus a fatty acid alkylolamide. Although dialkylol amides and isopropanolamides (for instance of lauric acid) appear most suited for this purpose, four to seven per cent fatty acid mono-alkylolamide is commonly incorporated in such products.

Ethylene oxide condensation products of fatty acid alkylolamides deserve mention as useful ingredients of liquid detergent formulations. Frequently they are combined with fatty acid diethanolamides.. Also considered good starting materials for liquid detergents are phosphoric acid esters of multivalent carboxylic acid alkylolamides. These compounds do not crystallize out and resist hydrolysis in the presence of the commonly used phosphate.

Nonionic surface active agents are particularly suited to compounding liquid detergent formulations. These surfactants may be condensation products of alkylphenol or fatty alcohol of either natural or synthetic origin. An example of the latter type is tridecyl alcohol made by the oxo process. Nonionics are used preferably in the form of water soluble salts, i.e. sulfated and neutralized. Sulfonation may be accomplished with oleum, sulfuric acid or sulfamic acid. Sulfated nonionics may be neutralized with sodium or potassium hydroxide or with either ammonia or triethanolamine.

Potassium or sodium alkylglycerylether sulfonates find use in the formulation of liquid detergents. They are derived by reacting epichlorohydrin with fatty alcohols and subsequent sulfonation with potassium or sodium sulfite. If higher fatty alcohols such as tallow alcohols are used as starting materials, surfactants will be obtained which act as opacifiers and impart to the liquid compound the appearance of an emulsion. This milky appearance can be enhanced

Formulation of satisfactory liquid detergents for laundering textiles is fraught with difficulty. Ways to solve the problem are indicated.

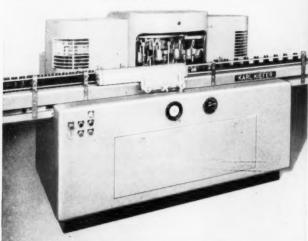
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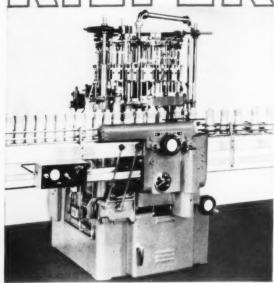
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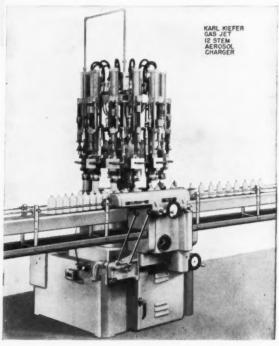
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by addition of sodium chloride or sulfate.

Ammonium, potassium or triethanolamine salts of fatty alcohol sulfuric acid esters may be employed alone or in combination with other surfactants. Examples of this group are the "Igepon" (General Aniline & Film Corp.) type of surface active agents which include sodium methyl taurate of coconut or tallow acid, and the ammonium salts of fatty acid monoglyceride sulfuric acid ester.

Another detergent ingredient may be sodium tridecyl-betasulfopropionate, of which 25 to 35 per cent may be combined with five per cent magnesium dodecylbenzene sulfonate and 15 to 25 per cent ethanol.

Choice of active detergent ingredients for liquid dishwashing and laundering compounds must be determined by detergency and ability to form stable and clear solutions in water or solvents. Next in importance to the formulator is the incorporation of considerable quantities of phosphates into liquid products, which is a difficult task. Apart from price there is no clear indication that potassium salts of phosphoric acids should be used as a matter of principle. Instinctively, the formulator may prefer potassium salts. However, many formulas call for mixtures of sodium and potassium salts, or for sodium salts alone. These may come as thixotropic suspensions and may require special processing, such as grinding in a ball mill. Potassium tripolyphosphates, tetra or penta, are commonly used in liquid formulations. Other suggestions call for the ammonium salt of an amidophosphate or the sodium salt of inositol hexaphosphoric acid, as well as salts of organic amine/phosphoric acid condensation products.

The literature mentions additions of 1.5 to three per cent lithium hydroxide as an alkaline solubilizer. It is said to ensure stability of solutions containing as much as 20 per cent sodium tripolyphosphate.

How high a proportion of phosphates should be built into liquid formulations? The answer depends on active content, chemical composition, and solvent content of the formulation and on the type of phosphate under consideration. Phosphate contents of 40 per cent and higher are mentioned by various authors but are too high in the author's opinion.

To endow liquids with soil carrying capacity comparable to that exhibited by powders, sodium and potassium salts of cellulose derivatives are added. These materials however may eventually be decomposed and form a sediment in an initially clear product. This risk is said to be minimized by the combined use of cellulose glycolate and methylcellulose. Some authors advocate a certain degree of esterification. Carboxymethylcellulose or

neutralized cellulose sulfuric acid ester are mentioned in this application. It is not known however whether these substances have been used with success.

Problems encountered in incorporating cellulose derivatives may be met by making liquid detergents in the form of emulsions, which usually contain additions of sodium or potassium silicates.

Liquid detergent formulations may contain 20 to 25 per cent solvent. This may be ethyl, propyl, or isopropyl alcohol; furfuryl alcohol; ethylene, isobutylene or propylene glycol; diethyleneglycolmonobutylether; etc. The rule that solubility of the active detergents increases almost proportionately to the amount of solvent present, may apply to cases where the product charge does not contain significant amounts of electrolytes.

Evaluating Detergents with Radioisotopes

RAPID and accurate detergent evaluation by methods using radioisotopes is described in a paper by M. F. Nelson of Atlas Powder Co., published in the September 1959 issue of Journal of the Society of Cosmetic Chemists. Entitled "Use of Radioisotopes in Detergent and Cosmetic Evaluation" the paper was first presented at a recent meeting of the society's New York Chapter. Detergency of metal cleaning solutions can be evaluated by use of carbon-14 tagged stearic acid, the author reports. The effect of sequestrants on detergent action can be studied by use of soil containing fission products as tagging agents. This method is particularly valuable in the determination of detergency with respect to radiological decontamination.

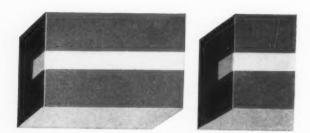
Other experiments involved the feeding of radioactive phosphorus-32 to bacterial cultures in order to establish the ability of various detergents to remove bacteria from dishes and other surfaces.

Detergency evaluation in terms of soil removal from textile

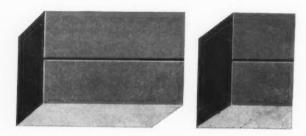
fibers is one of the most important aspects of detergency research. Soil tagged with fission products, namely carbon-14 and calcium-45, has been used for such studies. Oily paste prepared from radioactive carbon-14 lampblack mixed with mineral oil is used by several companies for this purpose. In the test, cloth is soiled by first picking up a small amount of the oily soil on an etched plate and rubbing it onto "Indianhead" muslin swatches. The swatches are radioassayed to obtain the amount of radioactivity representative of the amount of initial soil present, and are then washed with the detergent under test. The swatches are dried, again radioassaved and the amount of soil remaining is thus determined. Soil redeposition can be studied by including an unsoiled swatch in the washing apparatus and determining the amount of radioactivity picked up by this swatch. Commercial availability of cloth swatches soiled with carbon-14 tagged lampblack, protein or fat has further simplified the technique, the author says.

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CASE SEALING
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IS RIGHT FOR
YOUR PRODUCT?

AUTOMATIC TAPING?



AUTOMATIC GLUING?



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This test method is said to be simpler, more sensitive and faster than the conventional evalution studies, involving reflectometers or visual inspection as indicators of cleaning ability. Furthermore, changes in the surface of the cloth which can cause changes in reflectance have no effect in the radiotracer technique, which can be successfully applied to very small quantities of detergents.

One of the most recent techniques employs radioactive clay as a soiling agent. This clay is pre-

pared by the addition of calcium-45 or strontium-90 salts to normal clay with subsequent isotope exchange and the formation of tagged clay.

Radioactive tracer techniques may also be applied to measure the amount of soap or detergent adsorbed onto textile fibers. Adsorption of sulfur-35 tagged sodium lauryl sulfate and sodium alkyl benzene sulfonates and of carbon-14 tagged sodium palmitate have been studied. This work was undertaken to correlate detergent action and soil removal properties with adsorption, and to study the effect of detergent adsorption on soil redeposition.

The behavior of additives while being incorporated in detergent bases can be observed by the use of iodine-131 or sodium-22. This will yield information on the influence of stirring speeds, stirrer position and angles on the final product and will help to establish optimum proportions, processing temperatures, stirring times, and other factors.

Rapid Calculation of Moisture in Soap

A FORMULA for the rapid calculation of water content in soap can be based on saponification number and fatty acid content. This formula yields a factor which permits the setting up of a simple diagram from which the desired values can be read directly.

Assuming a normal soap base is being processed it would have a fatty acid content of 63 per cent. The charge would consist of 10 per cent coconut fatty acid, saponification number 260, and 90 per cent tallow fatty acid, saponification number (s.n.) 200. S.n. of the entire batch is

$$\frac{10 \times 260 + 90 \times 200}{100} = 206$$

The mean molecular weight of the fatty acids is

$$\frac{\text{mol. weight KOH} \times 1000}{\text{means s.n.}} = \frac{56,104 \times 1000}{206} = 262$$

Neutralization of the fatty acids (RCOOH) involves the following reaction:

(1) Anhydrous soap = weight of fatty acids – weight of hydrogen + weight of sodium

and water content conversely equals:

(2) Water = whole mass — anhydrous soap

Weight of the hydrogen substituted by sodium is calculated thus:

F.A. weight
$$\times$$
 atomic wt. of H = wt. of hydrogen, in the present example 0.242 kilo.

Chemically bound sodium content can be calculated on the basis of saponification number by the following equation:

Wt. Na (bound) =
$$\frac{\text{Wt.f.a. x s.u. x atomic wt. Na}}{\text{mol wt. KOH}} = \frac{63 \text{ x } 206 \text{ x } 23}{56.1 \text{ x } 1000} = 5.35 \text{ kilos}$$

at.wt.H

These values, added in proportion to the charge (1), yield the weight in kilos of the anhydrous soap:

$$63 - \frac{63 \times 1008}{262} + \frac{63 \times 206 \times 23}{56.1 \times 1000}$$

Translated into general terms the equation reads;

For the soap in our example having a charge of 10 per cent coconut fatty acids and 90 per cent tallow fatty acids the factor is 1.0809. Multiplied by any fatty acid content which may be found in this soap the factor will yield the anhydrous soap content. The moisture content in kilos equals 100 - fatty acid content x factor. The factor depends, of course, on the fat charge. A soap from 20 per cent coconut fatty acid and 80 per cent tallow acid has a factor of 1.083, i.e., just a little higher. In practice it is quite satisfactory to work with a round value of 1.08.

The diagram mentioned

above is obtained by calculating several sets of values and transferring them onto graph paper. Calculations might be made and

Once one value in a set is

$$= 1 \frac{1.008}{262} + \frac{56.1 \times 1000}{206 \times 23} = 63 \times 1,0809$$

s.n. x at, wt. Na

established analytically the other data can be read from such a diagram without further calculations. F. Scholtes in *Seifen-Oele-Fette-Wachse*, August 5, 1959, p. 464.

Self-Tuning Transducers

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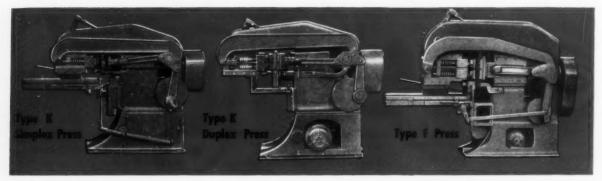
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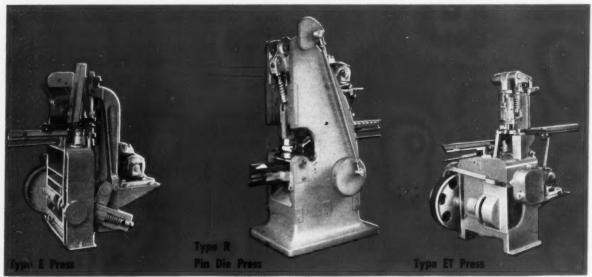
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Cartoners — Case Packers — Soap Presses

soap plant observer

By Willis J. Beach

Technical Service Department, Sugar Beet Products Co.

HE chemical specialties manufacturer is finding himself in the general squeeze, these days, between rising costs, keen competition and a price sensitive market—particularly in the industrial field.

To keep manufacturing costs down, production people are moving ever more in the direction of continuous processing and automatic control of materials both in fundamental information and in the latest trends and innovations in liquid flow measurement and control. In the next few issues, this column will touch upon these subjects—not as an expert but as an observer.

Flow measurement is beset with certain practical difficulties. Problems result from viscosity of the liquid, its corrosion properties, presence of suspended solids, and changes in its density due to composition and/or temperature deviations.

Perhaps the hydraulic principle most widely used to measure fluid flow is an offshoot of Bernoulli's principle, which states that the pressure of liquid in a pipe varies inversely to its velocity. If an orifice plate or a "Venturi" tube is inserted in the pipe of a flowing stream, a difference in pressure will occur in the pipe areas upstream and downstream from the device. This well-known principle can be demonstrated by attaching the ends of a manometer (a U-shaped tube containing a liquid) to outlets in the pipe above and below the device. The pressure differential is manifest by the difference in the height of liquid levels in the U-tube, and it will vary directly in a linear way



with changes in the velocity of flow.

Such a tube, when calibrated directly in terms of flow rate, is a simple differential pressure type of flow meter.

The differential meter, however, has a critical viscosity limit, which depends on the flow rate, pipe size and density of the liquid; and inaccuracies in measurement can occur if the critical viscosity is exceeded.

The same principle is used in another type of device that operates in a somewhat reverse fashion-the orifice area varies in size with changes in flow rate while the differential pressure remains constant. This is accomplished by passing the liquid up through a vertical tube. (It can be done horizontally, however). The tube is tapered and positioned so that the smallest cross-section area is at the bottom. A small float, made of a material resistant to corrosion by the liquid being measured, is located freely in the tube, and it floats in the stream at a position where its weight just counterbalances the differential pressure

produced as the liquid flows through the ring-shaped orifice existing between the rim of the float and the tapered wall of the tube. The tapered tube, if of glass, is then calibrated and the position taken by the float marks the flow in any convenient dimension selected. This is called a variable area flow meter and is also subject to measurement error if the velocity of flow exceeds a critical point. Specially shaped floats help to render these materials less susceptible to viscosity effects.

The variable area meter has several advantages: (1) It can measure lower flow rates more conveniently than most designs; (2) there is a wide choice of construction materials; (3) the stream flow is confined to the pipeline so that the system is completely sealed and can even be checked for heating and cooling if necessary; and finally, (4) since the float movement has a direct and linear relationship with the flow rate, a longer flow range can be obtained than with the differential meter.

Because the differential pressure existing on each side of an orifice is proportional to the square of the flow rate, the error in pressure measurement caused by a change in the density is equal to only half the actual change in density. A two per cent change in density then will cause only a one per cent meter error for the differential pressure meter. In the case of the variable area meter, if the float can be selected to have close to twice the mean density of the metered liquid, quite a range in liquid density can be tolerated without serious error in registration of the correct flow rate in weight units.

The subject of basic control theory is well covered and available in many texts and other sources. We will only offer a few

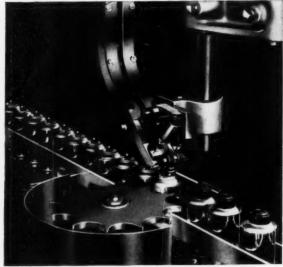
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IMITATION ESSENTIAL OILS

Bergamot No. 55 Citronella No. 55 Geranium No. 55 Lavender No. 55 Lemongrass No. 55 Neroli No. 55 Sandalwood No. 55 Sassafras No. 55 Ylang Ylang No. 55



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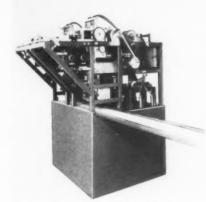
◆ Atlanta ◆ Boston ◆ Cincinnati ◆ Detroit ◆ Dallas
 ◆ Minneapolis ◆ New Orleans ◆ St. Louis ◆ San Francisco

Florasynth Labs. (Canada Ltd.) • Montreal, Toronto, Vancouver, Winnipeg Agts. & Dist in Mexico-Drogueria & Farmacia Mex. S.A., Mexico 1, D.F. Sales Offices in Principal Foreign Countries definitions and comments to act as a backdrop for later presentation of equipment.

Automatic flow measurement may be performed on a continuous or discontinuous basis. Very little use is made of the discontinuous type of controller in process stream flow control, although the system employs easily adjustable and inexpensive devices. However, discontinuous type controllers have their place in processing. Two-position on-off controllers can be quite effective in controlling liquid level and inputoutput balance in a mixing or reaction chamber.

The more popular continuous type control systems can be based on one of three basic types of action. Each can be explained by reference to the problem of maintaining liquid level in a tank.

1. In proportional control, corrective action is directly proportional to the deviaton from the present level. For example, the lower the liquid level in the tank, the wider will the inlet valve be opened; the higher the liquid rises above the prescribed level, the smaller will be the inlet valve opening.



Above: "Speedway" liquid filling machine. Right: Cluster package made on "Speedway."

2. In *integral control*, as the level stabilizes at a new control point the valve is readjusted to return the level to the correct set point, often called the index.

3. In derivative control, a sudden change in level will cause the valve to open or close more than enough to offer normal control, thus ensuring rapid return to the correct level, or index setting.

Next month we plan to illustrate and discuss in detail some of the newer trends in metering and liquid controlling equipment.



Pouch Container Machine

A new automatic liquid-filling machine, "Speedway Model LF-60," that forms, fills, and seals pouch-type containers for liquids, creams, and pastes is now offered by Speedway Machine & Tool Co., 1802 N. Luett St., Indianapolis, Ind.

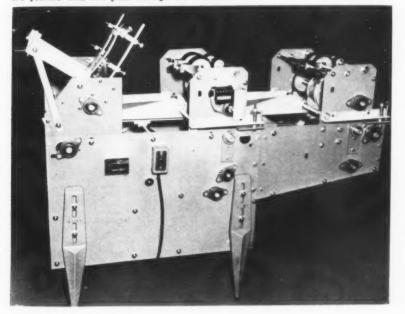
The new machine forms leakproof packages from roll stock of cellophane, foil, "Pliofilm," polyethylene, or laminated combinations. Package sizes vary in length from one to 12 inches, and in width from ½ to 8½ inches. It is said that virtually any combination of single or cluster packages within this range can be produced.

Using two independently operated packaging stations, the "Model LF-60" has a variable speed of 15-36 strokes a minute. With each station producing a cluster of four packages, for example, the machine's capacity would be 120-288 packages a minute. Over-all height is 6½ feet, and dimensions at the base 44 x 48 inches. Speedway notes that since there are no electronic or other complicated parts, semi-skilled workers can operate and maintain it.

CSC Methanol Brochure

Synthetic methanol, its properties, handling, storage and toxicity data are the subject of a new 34 page brochure available from the industrial chemicals department of Commercial Solvents Corp., 260 Madison Avenue, New York 16.

New code dating and printing machine (model 1016HV) of Kiwi Coders Corp., Chicago, prints a code date utilizing steel type, plus the contents and ingredients in one color, and the price and weight in red, utilizing rubber type. Both colors are printed with one pass through the machine.





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This Houchin Crutcher is designed with the power to mix thick soap stocks and high viscosity chemicals. Equipped with a variable speed drive, infinitely adjustable between 23.3 and 93.0 R.P.M. while the mixer is in operation, its impeller speed can be matched to the changing viscosity of the mix.

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Ejection of charge and cleaning of bottom is accomplished by sweep paddle at inner base of Crutcher.

Houchin Crutchers can be furnished with tanks of black iron, or with inside surfaces of stainless steel, with various types of screw or mixing blades. Tanks can be jacketed for heating or cooling. Write for full details today.

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IN CHICAGO A. C. DRURY & CO., INC., 219 E. NORTH WATER ST.

new patents

Listed below are brief abstracts of recently issued patents. Complete copies may be obtained from the publisher of this magazine:—Mac-Nair-Dorland Co., 254 W. 31st Street, New York 1, N. Y. Remit 50¢ for each copy. For orders received from outside of the United States send \$1.00 per copy.

No. 2,941,950. Concentrated Liquid Detergent, patented by Edwin O. Korpi and Robert P. Davis, Cincinnati, assignors to Procter & Gamble Co., Cincinnati. Revealed is a single phase concentrated liquid detergent composition consisting essentially of

(a) 25 to 40% of a sulfated and neutralized reaction product obtained from condensing 1 to 5 moles of ethylene oxide and 1 mole of monohydric alcohol of from 10 to 16 carbon atoms in the molecule, said reaction product including unreacted alcohol and otherwise consisting essentially of a mixture of fatty alcohol-ethylene oxide ethers of the general formula of

R(OCH2CH2)xOH

where R represents an alkyl chain of 10 to 16 carbon atoms in the alkyl radical, x is a plurality of whole numbers within the range from 1 to 12 inclusive, said unreacted alcohol and mixed alkyl ethers being sulfated, and then neutralized with a neutralizing agent selected from the group consisting of ammonia and alkylosubstituted ammonia having from 2 to 3 carbon atoms in the alkylol group;

(b) An organic builder substance consisting essentially of alkylol amide of saturated fatty acids having 10, 12 and 14 carbon atoms and an alkylol amine, said alkylol amide having not more than 3 carbon atoms in each alkylol radical and the amount thereof being from 6 to 12% of the composition.

(c) 15 to 25% of alcohol from the group consisting of ethanol, normal propanol and isopropanol;

(d) Not over 5% of extraneous substances (such as sulfates and chlorides of the ammonia or substituted ammonia) used, plus unsulfated alkyl ethers and other reaction products:

(e) Water to make 100%, said composition being stable against clouding, precipitation of solids, and gelling at temperatures as low as 50° F., and with a freeze recovery of 4 hours or less.

2,941,951. Foaming Detergent Compositions, patented by Charles F. Jelinek, Easton, Pa., and Raymond L. Mayhew, Phillipsburg, N. J., assignors to General Aniline & Film Corp., New York. Described in this patent is a foaming non-soap detergent composition comprising, by weight, about 25 to 75 parts of a detersive water-soluble anionic sul-fate ester of a polyoxyethylene de-rivative of an organic compound of least 10 carbon atoms, about 75 to 0 parts of a water-soluble anionic alkyl aryl sulfonate detergent containing from 8 to 20 alkyl carbon atoms, and about 10 to 90% of the combined weight of said anionic detergents of a non-ionic surface active polyoxyethylene ether of a branched chain primary aliphatic al-cohol of from about 8 to 18 carbon atoms containing about 50 to 90% of combined ethylene oxide, said alcohol having the molecular configuration of an alcohol produced by the Oxo process from a multi-branched chain olefin of from 7 to 17 carbon atoms.

No. 2,941,948. Detergent Compositions, patented by Joseph Blinka, Cincinnati, and James E. Henjum, Green Township, Hamilton County, O., assignors to Procter & Gamble Co., Cincinnati. The patent claims the process of making a coherent mechanically worked synthetic detergent composition from ingredients comprising essentially, water, sodium sulfate.

NaxH3-xP3O3

wherein x is a value in the range of from 4 to 5, and at least one watersoluble anionic synthetic organic detergent salt selected from the group consisting of anionic sulfate and sul-fonate synthetic detergents, the steps which comprise: (1) blending a mixture of water, from about 10% to about 50% by weight of total solids of said synthetic detergent salt, and from about 30% to about 70% by weight of total solids of said sodium sulfate and Na_xH₂—_xP₂O₁₀, the molar ratio of sodium sulfate to Na_xH₂—_xP₂O₁₀ being from about 2:1 to about 3:1 and the water content being such that the inorganic constituents are substantially entirely in solution, (2) drying the mixture until said inorconstituents have substantially entirely crystallized from solution and over a period of time not exceed-ing about five minutes, thereby promoting co-crystallization of the sodium sulfate and Na,H2-XP2O30 to form a complex having an X-ray diffraction pattern corresponding to that shown in the drawing characterized by strong diffraction line values of the angle 20 of 18.9°, 22.8°, 25.4°, 31.9°, 32.2° and 46.7°, and (3) thereafter mechanically working the mixture at an initial water content of from about 2% to about 12% by weight of total product and at a temperature of from about 50° F, to about 175° F., said water level and temperature being

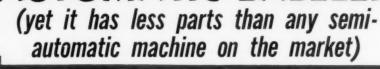
such that the mixture can be effectively mechanically worked as a plastic coherent mass.

No. 2,944,977. Process for Preparing Aqueous Soap-Synthetic Detergent Mixtures in Ribbon Form, patented by Russell Edward Compa, Bogota, N.J., assignor to Colgate-Palmolive Co., Jersey City, N.J. The patent teaches a process for the preparation of homogeneous, form-retaining ribbons of an aqueous mixture of synthetic detergent and soap which comprises forming, at a temperature above its setting-up point, a homogeneous aqueous mixture of a sodium soap of a substantially completely saturated higher fatty acid containing from about 16 to 18 carbon atoms and a sodium salt of a higher fatty acid monoglyceride sulfate detergent wherein said fatty acid contains about 12 to 18 carbon atoms, said aqueous mixture containing about 30 to about 35% water and said soap comprising about 35 to 70% of the solids in said mixture, chilling said mixture to a temperature below its setting-up point, and forming the thus set-up mixture into form-retaining ribbons.

No. 2,941,952. Dry Cleaning Detergent Composition, patented by John T. Lewis, Dayton, and Lloyd E. Weeks, Union, O., assignors to Monsanto Chemical Co., St. Louis, Mo. A dry-cleaning detergent composition for fabrics is described which comprises from 93% to 99.75% by weight of a volatile, organic liquid of the dry-cleaning type, and from 0.25% to 7% by weight of a combination composed of from 70% to 97% by weight of a condensation product of a hydroxyl-containing organic compound having from 8 to 18 carbon atoms condensed with from 2 to 8 moles of an alkylene oxide having from 2 to 3 carbon atoms together with from 3% to 30% by weight of an alkaline salt of the sulfate of a condensation product of a hydroxyl-containing organic compound having from 8 to 18 carbon atoms condensed with from 2 to 8 moles of an alkylene oxide having from 2 to 3 carbon atoms condensed with from 2 to 8 moles of an alkylene oxide having from 2 to 3 carbon atoms.

No. 2,945,815. Abrasive Detergent Composition, patented by Ramon Bruno Diaz, Douglas Manor, N.Y., assignor to Colgate-Palmolive Co., New York, Claimed is an abrasive detergent composition which is substantially non-scratching to porcelain and is of excellent cleaning power, which consists essentially of a major proportion of silica, the particle sizes of which are distributed throughout the range from about 6 microns to the maximum size which will pass a 140 mesh sieve, the weight distribution of the silica particles being that obtained by size-reducing sand so that a major proportion of the sand subjected to size reduction will pass a 200 mesh sieve and then removing particles outside the 6 micron to 140 mesh sieve range, and a miror proportion, up to about 20%, of a water soluble synthetic organic detergent.

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products and processes

Hard Water Quaternary

A new quaternary ammonium compound registered by the U. S. Department of Agriculture for use in waters up to 850 ppm hardness, has been introduced recently by Intex Chemical Corp., Lodi, N. J. Trade named "Intexsan 7212" the product fulfills the criteria of Appendix F of the Milk Ordinance and Code of the U. S. Public Health Service, according to the manufacturer.

Said to hold promise for general disinfection and sanitization in the dairy, food processing and other field, the product is a mixture of alkyl dimethyl benzyl ammonium chloride and alkyl dimethyl dichloro benzyl ammonium chloride. A cationic surface active agent, it is a clear, mobile, light amber liquid. In use dilutions it is said to be colorless and virtually odorless.

New Pennsalt Nonionic

A new concentrated liquid cleaner for dairy, food plant, and household use has just been added by Pennsalt Chemicals Corp., Philadelphia, to its line of "B-K" cleaners and sanitizers. Designated "PenGlo" the new nonionic detergent formulation is said to be high sudsing, readily soluble, mild to skin and substances, and effective in all types of water. It is claimed to exhibit good rinsability.

Compounded for use on dairy plant equipment and utensils, the product is said to perform well as a dishwashing detergent and in cleaning truck and auto bodies. Use dilution is one tablespoon of "Pen-Glo" in three gallons of water.

The product comes in fivepint jugs with safety grip handles. In individual cartons, six to a case, each jug is accompanied by a coupon good for a free dispenser. A folder describing "Pen-Glo" is available from Pennsalt's B-K Department.

Fungistat for "Neoprene"

"Ottacide-P," a fungistat made by Ottawa Chemical Co., Toledo, O., was reported recently to prevent fungus growth in "Neoprene" without adversely affecting physical properties or aging characteristics of this elastomer by E. I. du Pont de Nemours & Co. Other Ottawa Chemical products are "Ottasept" and "Ottafect" germicidal and fungicidal additives for the toilet goods, pharmaceutical and other industries.

"Ottacide-P" was introduced a year ago as an inhibitor of fungus growth in polyvinyl chloride compounds and their polymers.

New Dearborn Products

A new line of liquid bactericidal and algicidal products for industrial cooling water treatment has been introduced by Dearborn Chemical Co., Merchandise Mart Plaza, Chicago 54. "Dearcides" are claimed to be noncorrosive and compatible with sulfates, phosphates, chlorides, or carbonates present in the water. The products have a low flash point minimizing fire hazards, according to the manfacturer.

At the same time the firm announced "Dearborn Air Wash Treatment #1," a surface active compound claimed to remove sticky deposits or prevent their formation in industrial air wash systems.

Atlas Laundry Softeners

Cationic laundry softening compounds are the subject of two bulletins published recently by Atlas Powder Co., Wilmington, Del. "G-3570" forms a stable dilute dispersion suitable for marketing as home laundry softener, according to the manufacturer. Described as a high molecular weight fatty amine blend, the material is said to impart pleasant softness to fabrics made from natural or manmade fibers at concentrations of from 0.05 to 0.15 per cent. Softeners for home use generally contain four to five per cent active ingredient and are normally applied in the last rinse of the washing cycle. One half cup of four per cent dispersion of "G-3570" added to each eight pounds of laundry is said to yield good results.

A commercial laundry softener designated "G-3573" is described in a second products information bulletin. For best results a 25 per cent dispersion of "G-3573" should be used during the final rinse, the bulletin suggests. For a 300 pound load one pint of the dispersion should be added after the hot rinse water has been run into the machine.

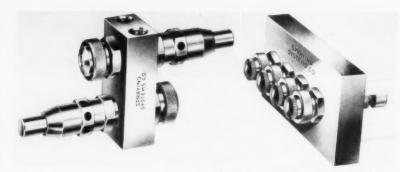
IFF List Marks Carbinols

Carbinols and their esters are featured especially in the July issue of Aromatic Chemicals, price list and catalog published by Polak & Schwarz International N. V., Zaandam, Holland, division of International Flavors and Fragrances Inc. "Although largely floral in character, the carbinols and their esters may be used in modern bouquets, in aldehydic types and in classical types such as fern" the 12-page booklet says. Claimed to be very stable and to possess good fixative properties, carbinols and their esters are stable to alkali and highly soluble in ethyl alcohol, will not cause discoloration in soap or cosmetic formulations, according to this description.

The catalog quotes prices in U. S. dollars, sterling, and Dutch currency, f.o.b. Holland. IFF's New York address is 521 West 57th Street, New York 19.

New Nozzle Assemblies

Spraying Systems Co., Bellwood, Ill., is now manufacturing pneumatic atomizing nozzle assemblies to customers' specifications to provide special design characteristics in terms of nozzle positioning, spray projection, mounting and control. To produce this type of unit, either standard or special fluid and air nozzles are employe:! and mounted to specially built body assemblies. Special nozzles of this type are required because of



space limitations in the mounting location or area. Figure 1 illusFigure 1. (left) Two nozzles with opposed spray projection, mounted on common body with common air and

Figure 2. Four nozzles assembled to a single body with common air and liquid inlet is designed for mounting in narrow opening.

trates an example of a special pneumatic atomizing nozzle. For this application, two nozzles were needed, each with a clean-out needle assembly, but space was limited. The required opposed projection was obtained with a single compact unit employing a common body for both nozzles. Another example is shown in Figure 2, in which four nozzles had to be mounted in an opening that was extremely narrow. The solution here was to mount all four nozzles on a special body manifold that incorporated a common air and liquid inlet, with each nozzle individually controlled with a separate shut-off needle.

HERE'S A MIXER THAT **GUARANTEES A** CONSTANT UNIFORM MIX The MARION MIXER mixes to Laboratory uniformity . . . Consistently through its Exclusive Mixing and Blending Action.

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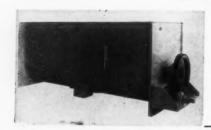


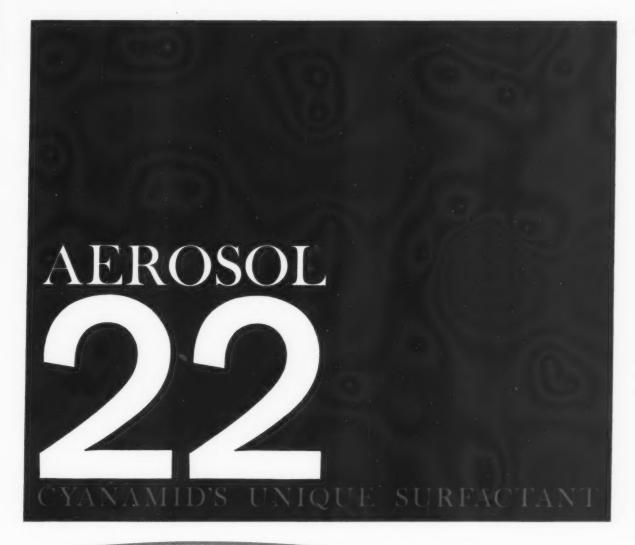
dustrial ultrasonic cleaning was announced recently by Powertron Ultrasonics Corp., Garden City, N.Y. Transducers are the units which produce the "cold boiling" on which ultrasonic cleaning is based.

Ultrasonic Cleaning

(From Page 151)

Three different transducers are produced for use with the "Autosonic" 30 watt generator: one 3 x 9 x 4, another 9 x 11 x 4, and a third 5 x 16 x 4 inches high. Two models, 12 x 15 x 4 and 4 x 30 x 4 inches high are designed for use with the 700 watt genera-





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Potential use of Aerosol 22 as an additive in oven cleaners merits consideration. It has high rinsibility and viscosity lowering properties—it increases penetration and creates no gel structure to inhibit cleaning action. Possibilities of Aerosol 22 in auto cleaners are also interesting—due to non-rewetting properties, ability to remove dirt from hard surfaces and ease of rinsing.

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Napalm incendiary bombs, used in the Korean War for skip-bombing, are compounded of Oleic Acid, Coconut Fatty Acids, and Naphthenic Acid. Similar formulations are now used to treat non-productive oil wells, to clean the wells, and promote the flow of oil,



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Below are facts you should know about two Fatty Acids produced by A. Gross. Why not write for samples and additional information on the Fatty Acids we produce. Send for the latest edition of the brochure "Fatty Acids in Modern Industry." Address Dept. S-3.

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Titre		22° — 25°C.
Color 51/4" Lovibond Red	0.5 max.	1.5 max.
Color 5¼" Lovibond Yellow Color Gardner 1933		12 max. 2 max.
Unsaponifiable	209 – 212	0.50% max. 260 — 270
Acid Value	208 - 211	260 — 270 8 — 12

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book reviews

Silicone Defoamers

"ABC's of Defoaming" is the title of an eight page brochure just issued by Dow Corning Corp., Midland, Mich., covering performance and usefulness of Dow's "Antifoam A," "B" and "C."

"When a foam bubble contacts a silicone defoamer, the surface film is weakened to the point of breaking and the bubble vanishes," the booklet explains. Silicones work as antifoamers and as defoamers, and may be included as part of the charge that makes up the batch, or added during processing to suppress unwanted ofam.

Antifoam "A" is an emulsion concentrate, "B" and "C" are diluted emulsions. Production of polishes, waxes, soaps, detergents, textiles, and a number of other products are among their fields of application. Grades "A" and "C" have been passed by the Food and Drug Administration, whereas "B" has no such sanction. Use dilutions and modes of applications are covered by the brochure.

ECM and U. S. Industry

"E C M — Opportunity or Threat?" might have been the title of a private conference held recently at Columbia University's Arden House in New York. Sponsored by Arthur D. Little, Inc., Cambridge, Mass., consultants, the event's official title was "The European Common Market and the American Chemical Industry." Proceedings of the meeting are now available in the form of 102-page paper bound report called "American Industry in Europe."

According to many conferees at Arden House principal opportunities for the chemical industry exist in the raw materials and products destined to grow with the rising living standard in Europe. This category would include products for the food, packaging, pharmaceutical, clothing, housing and transportation industries. Detergents were mentioned specifically among consumer products which will grow through new mass marketing techniques. Conferees generally agreed that direct investment was the best means of taking advantage of ECM developments.

Conference seminars were presided over by C. J. McFarlin, Air Reduction Chemical Co.; Emil Ott, Food Machinery & Chemical Corp.; Charles E. Waring, W. R. Grace & Co.; W. Samuel Carpenter III, International Department of E. I. du Pont de Nemours & Co. The group heard addresses by Arthur Wilhelm, Ciba Ltd., Basle, Switzerland, and Helmuth Borgwardt, Farbenfabriken Bayer, A.G.

Copies of the report are available at \$3.00 each from Arthur D. Little, Inc., 35 Acorn Park, Cambridge, Mass.

Sulfuric Acid Data

A revised edition of its sulfuric acid reference booklet has just been published by General Chemical Division of Allied Chemical Co., 40 Rector Street, New York 6. Information of uses, manufacture, properties, storage, handling and methods of analysis is supplied in text, charts and graphs contained in this 40 page publication.

Waverly Product Bulletin

"Magnesol," described as a finely divided free flowing synthetic magenesium silicate of porous structure, is the subject of a product bulletin just issued by Waverly Chemical Co., Mamaroneck, N. Y.

Said to be "relatively" chemically inert and insoluble in water and most organic solvents, the material absorbs preferentially acidic and polar compounds.

Applications include, among others, anticaking agents in deter-

gents and absorptive cleaning and polishing agents in dentifrices.

Armour Amides Data

High molecular weight aliphatic amides marketed under the trade names "Armid HT," "Armid O," "Armid C" and "Armowax" are described in a new 24-page brochure available from Armour Industrial Chemical Co., 110 N. Wacker Drive, Chicago 6.

"Armid C" is a coco fatty acids derivative, suggested for use in detergents where it is claimed to act as foam booster and stabilizer. The material is said to act as a detergency synergist with sulfonated alcohols and methyl tauride derivatives. Use of "Armid C" in detergent formulations is covered by several basic patents.

"Armid HT" is particularly suitable for use as a basic ingredient of textile water repellents, according to the booklet. "Armid O" is suggested as a temporary dip or spray coating, said to afford protection against fungal attack and resistance to damage by salt water.

Described as a hard, brittle, high melting wax produced by reaction of stearamide and paraformaldehyde in the presence of a suitable acid catalyst, "Armowax" can be formulated into nonionic and cationic emulsions, both of which are said to be stable and of fine particle size. Films laid down and dried from the cationic emulsion are resistant to water spotting and, with light buffing, will produce high gloss, according to Armour.

Hardness and high melting point of "Armowax" indicates applications in auto polish emulsions, and with further modifications also in floor and furniture polish manufacture, the brochure indicates. Many applications other than those mentioned here are described in the booklet for both "Armids" and "Armowax."

NEW kid glove treatment helps our hottest bomber keep cool

Special polish with low-abrasive Celite guards the B-58's sensitive skin

Now J-M Celite* has a national defense assignment—helping our newest A-bomber, the Convair B-58 "Hustler," run at supersonic speeds!

Everything about this high-performance aircraft, right down to its gleaming metal skin, says "speed." This high-luster, low-friction surface has been called one of the most vital achievements in modern aircraft development.

To maintain this precision skin—without damaging or scratching the special metal alloys—Convair has specified a new polish-cleaner called Once!.† The only abrasive in Once! is Snow-Floss, a unique polishing grade of Celite. Because of the porous, thin-walled structure of its diatomite particles, Snow-Floss never scratches. Each particle collapses like a micro-

scopic buffer, removing foreign matter and maintaining a precision smoothness that lasts.

Snow-Floss provides easier application and rub-off, too. Highly absorptive, it soaks up and retains dirt and grease films that would otherwise resist rub-off and reduce sheen. This explains why it has gained acceptance as the major abrasive in all types of polishes.

Snow-Floss and the other Johns-Manville Celite grades produced for polishes are carefully controlled from bag to bag. Find out which fits your needs . . . call your nearby Celite engineer or write direct. Johns-Manville, Box 14, New York 16, N.Y. In Canada, Port Credit, Ont.

°Celite is Johns-Manville's registered trade mark for ita diatomaceous silica products. † Once' is a registered trade mark of the American Silicone Company, Englewood, Colorado.

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Outstanding caustic rust removal compounds are possible with Pfizer Gluconates. Besides dissolving rust efficiently, the presence of gluconates will retard after-rust and prolong the life of the bath. Also, a small amount of gluconate added to standard alkaline cleaning compounds helps in the removal of light rust films.

ALUMINUM ETCHING

Pfizer Gluconates in aluminum etching compounds prevent the formation of hard, adherent scale. Efficient and economical, too, because you use very little gluconate in the compounds, yet assure an even, uniform etch.

STRIPPING PAINT FROM STEEL

Pfizer Gluconates improve the efficiency of caustic paintstripping compounds. They increase the rate of paint film removal and permit free rinsing of the paint-stripped metal. In addition, Pfizer Gluconates eliminate the usual after-film of iron oxide.

Pfizer Gluconates have a proven record of stability in caustic compounds, both in storage and in use. Be sure your caustic formulation line is complete. Write to Pfizer for technical data and use-level information on sodium gluconate and gluconic acid.

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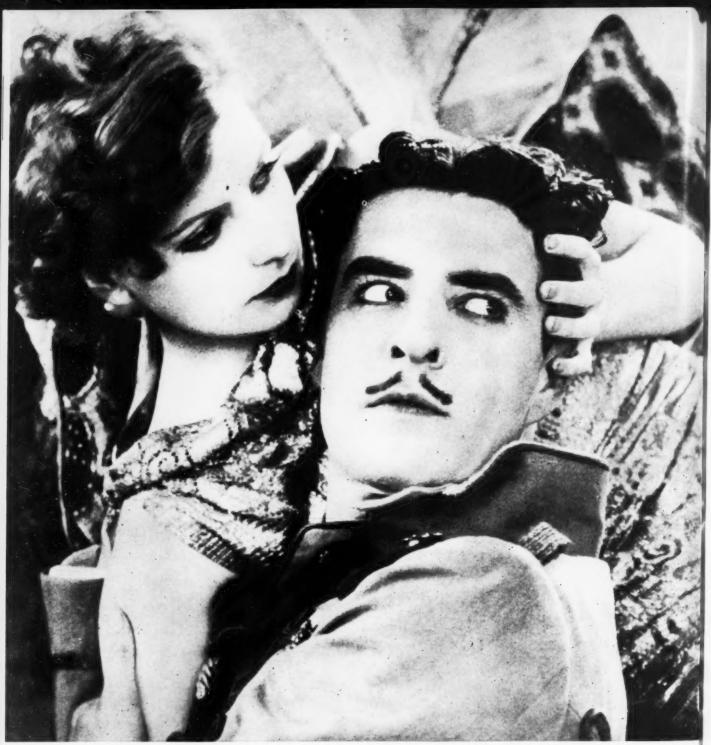


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News...

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NEWS

Kornett Oakite Director

Oakite Products, Inc., New York, manufacturers of chemical compounds for industrial cleaning



Peter J. Kornett

and metal treating, announced last month that Peter J. Kornett, general manager of manufacturing, has been elected to the board of directors.

Mr. Kornett joined Oakite in 1941. In his capacity as general manager of manufacturing, he is responsible for the firm's production of 165 products for application in the metal-working, petroleum, and other industries.

DuBois on Stock Exchange

Stock of DuBois Chemicals, Inc., Cincinnati, manufacturer and distributor of cleaning and processing compounds used in the industrial, institutional, and commercial fields, is now listed on the New York Stock Exchange. It is known on the trading floor by the symbol "DU." A total of 2,177,021 share of DuBois capital stock was listed.

For the year ended February 29, 1960, net sales were \$25,301,000, and net income was \$2,341,700, or 95 cents a share. For the comparable period in 1959, the figures were \$21,458,000, and \$2,097,000, or $84\frac{1}{2}$ cents a share.

DuBois Chemicals was founded in 1920 under the name DuBois Soap Co. The present company was formed in April 1960, through a merger of Hall-Scott, Inc. DuBois also manufactures and distributes dispensing and control equipment, proportioners, and injectors. Other plants are located in Los Angeles, Dallas, and East Rutherford, N. J.

Dahl Helps Travelers Aid

Nils S. Dahl, general sales manager of John T. Stanley Co., Inc., New York, has accepted the appointment as chairman of the soap division of the Travelers' Aid Society of New York's 55th Annual Fund Drive, according to a recent announcement by Wallace W. Lee, Jr., general chairman of the drive.

Wrisley Co. Names Edwards

Wayne E. Edwards was elected vice-president of manufacturing and research of Allen B. Wrisley Co., Chicago, subsidiary of Purex Corp., South Gate, Calif. He directs manufacturing, research, purchasing, packaging engineering, quality control, traffic and warehousing for the company.

Mr. Edwards was formerly Wrisley's research director.

Wayne E. Edwards



Calgon Names Copenhaver

E. I. Copenhaver was advanced recently to manager – special applications for the commercial applications.



E. I. Copenhaver

cial detergents division of Calgon Co., Pittsburgh, Pa. With Calgon for over 16 years, Mr. Copenhaver was previously mid-west zone sales manager. He has pioneered thedevelopment of specialized industrial cleaning compounds and procedures.

In his new post Mr. Copenhaver will specialize in applications of special cleaning compounds and automatic controls in food, processing, dairy and pharmaceutical industries.

A division of Hagan Chemicals & Controls, Inc., Calgon Co. manufactures hand and machine dishwashing compounds, rinsing agents, and electronic detergent controls for food processing and allied fields.

Williams on Waterways Ed.

W. E. Williams, president of Procter & Gamble Co. of Canada and president of the Metropolitan Toronto Board of Trade, was appointed last month a member of the board of directors of Great Lakes Waterways Development Association.

PILOT DETERGENTS

CONCENTRATED QUALITY CUTS COSTS

HD-90

90% Minimum active dodecyl benzene sodium sulfonate flake

SP-60

56% Minimum Active dodecyl benzene sodium sulfonate paste **ABS-99**

96-98% Dodecyl benzene sulfonic acid TS-60

60% Triethanolamine

MORE DETERGENT SUDS PER DOLLAR

10% HIGHER CONCENTRATION AT EQUAL COST—That is what these unique, cold-processed sulfonates make immediately available to you. The four products above, as well as the four listed below, offer new possibilities for detergent formulations.

- AEL-60 AMMONIUM NONYL PHENOL TETRA ETHOXY SULFATE
- SEL-60 SODIUM NONYL PHENOL TETRA ETHOXY SULFATE
- KTS-40 POTASSIUM TOLUENE SULFONATE
- SXS-90 SODIUM XYLENE SULFONATE FLAKE

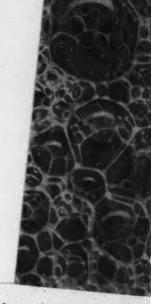
FOR SUPERIOR LIGHT-DUTY LIQUIDS with outstanding cleaning, rinsing, foaming and detergency characteristics select either AEL-60 as the 60% Ammonium Salt, or SEL-60 as the 60% Sodium Salt.

FOR SUPERIOR HEAVY-DUTY AND ALL PURPOSE LIQUIDS with maximum flexibility in your formulation specify either KTS-40 as the 40% Potassium Salt, or SXS-90 as the 90% Sodium Salt of Xylene Sulfonate (dry flake). Both of these Filot Products act as solubilizers to bind organic sulfonates and alkaline builders in stable, clear detergent solutions.

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NYX for the particular surfactant that fits your needs. Available in large commercial quantities or for research purposes, Onyx surfaceactive agents fulfill a wide variety of uses, too numerous to list in detail. Below is a partial listing of the wide range of products developed by the Onyx Chemical Corporation over fifty years of research and production in the field of organic chemicals. For complete data on these and other Onyx products write for our latest catalog SA. A member of our laboratory staff will be pleased to consult with you about a specific problem . . .at no obligation of course.

PRODUCT	1	DESCRIPTION	PERCENT	PHYSICAL STATE	APPLICATION
QUATERNARIES	Ammonyx 4 Ammonyx 4002	Stearyl dimethylbenzyl ammonium chloride	25 100	Paste Powder	Cosmetic anti-static and conditioning agents
	Ammonyx CO	Cetyl dimethyl amine oxide	20	Liquid	Wetting, emulsifying. Acid & alkali stable
	BTC 2125	Alkyl dimethyl ethylbenzyl ammonium chlorides	50	Liquid	Disinfectant, deodorant, germicide, fungicide— High hard water tolerance levels— 750 ppm
	Isothan Q-75	Lauryl isoquinolinium bromide	75	Liquid	Fungicide—dandruff contro
	Onyxide Series	Alkenyl dimethyl ethyl ammonium bromide	75	Paste	Algicide
	Ammonyx 781	Alkyl methylisoquinolinium chloride	50	Liquid	Biocidal agent industrial water treatment
	BTC 1100	Alkyl dimethyl naphthal ammonium chloride	100	Powder	Broad spectrum biocidal agent—hard water tolerance level 1100 ppm
NON-IONICS	Neutronyx 600 Series	Alkylphenol polyglycol ether con- taining from 4 to 30 moles ethylene oxide	100	Liquid	Detergent, wetting, emulsifying, dispersing
	Onyx-ol 336 & Onyx-ol 345	Lauric acid diethanolamine condensate	97	Liquid	Foam stabilizer, detergent, wetting, dispersing and thickener
	Onyx-ol 368	Lauric acid isopropanolamine condensate	97	Powder	Foam stabilizer
	Super Amide Series	High activity diethanolamine condensates	75-90 (as amide)	Liquid to solid	Foam stabilizers, emulsifiers and thickeners
SULFONATED OILS		Castor, soya, sperm, tallow	Various	Liquid	Detergent, dispersing
LAURYL SULFATES	Maprofix ES	Sodium lauryl ether sulfate	28	Liquid	
	Maprofix LK	Sodium lauryl sulfate	90	Powder	Detergent, wetting, foaming and dispersing agents for industrial, cosmetic and pharmaceutical applications, pigment and latex dispersions
	Maprofix WA Series	Sodium lauryl sulfate	30	Liquid to paste	
	Maprofix 563	Sodium lauryl sulfate	99	Powder	
	Maprofix NH	Ammonium lauryl sulfate	30	Liquid	
	Maprofix TLS Series	Triethanolamine lauryl sulfate	40-75	Liquid to paste	
ANTI-STATIC AGENTS	Aston 108 & Aston 123	Thermosetting polyamine	20	Liquid	Durable anti-static agents
	Aston AP	Cationic polyamine	50-100	Liquid	Anti-static agents, water and solvent soluble



ONYX Chemical Corporation • 190 Warren St., Jersey City 2, N. J.





ACS Told of Improved Detergents

NONIONIC detergents of good cotton detergency may be prepared from alkylbenzoic acids condensed with ethylene oxide to form polyglycol ethers, according to J. F. Coates and R. M. Lincoln, Atlantic Refining Co., Philadelphia 1, Pa. The authors presented their report before the Division of Industrial and Engineering Chemistry of the American Chemical Society, Monday, Sept. 12.

The benzoic acids were prepared by alkylation of toluene with isobutylene or propylene polymers followed by air oxidation to the alkylbenzoic acid.

The authors reported on launderometer tests which showed these nonionics to compare favorably with commercially available cotton detergents.

Papers presented before Division of Agricultural and Food Chemistry at the 138th national meeting of ACS, held in New York, Sept. 11-16, included among others the following titles: "The Relationships of Resistance in the Housefly to the Reactivity of the Tertiary Aliphatic Carbon-Hydrogen Group in DDT," by Douglass J. Hennessy, Joseph Fratantoni, James J. Hartigan, Andrew C. Dachauer, S. J., and Sister Miriam Grace Solomon, S. C., Fordham University, Bronx, N. Y.

"A Mechanical System for the Dispersion of Known Amounts of Insecticidal Vapors," was discussed by Jens A. Jensen and George W. Pearce, U. S. P.H.S., Savannah, Ga. The system devised has these features: (a) a known controlled amount of insecticide can be dispersed; (b) it can be adapted to any enclosed space, with or without air change; (c) it can be made semi- or fully automatic; (d) any insecticide with sufficient vapor pressure can be used; (e) the use of a set airflow rate and single treatment cartridge completely prevents the occurence of hazardous concentration levels.

"Problems of Analytical

Methodology under the Recent Food Law Amendment," by Kenneth Morgareidge of Food and Drug Research Laboratories, Inc., Maspeth 78, N. Y., and "Chemical Problems Encountered in the Administration of the Food Additives Amendment," by L. L. Ramsey, Food and Drug Administration, were part of a symposium on Analytical Methods for Food Additive and Pesticide Chemicals.

"Properties and Potential Uses of Sodium Cellulose Acetate Sulfate, A new Water-Soluble Cellulose Derivative," was presented by G. P. Touey, and W. M. Gearhart, Eastman Chemical Products, Inc., Kingsport, Tenn., before the Division of Chemical Marketing and Economics. Suspending, emulsion stabilizing, water retaining and film forming properties of this material were described. Its use in detergents, water-soluble unit packages, cosmetics and other fields was suggested.

Russell Stoddard Dies

Russell B. Stoddard, well known American pyrethrum expert, died September 12 at the Lenox Hill Hospital, New York.



Russell B. Stoddard

He was 69 years old. At the time of his death, he was president of Ecampyco, Inc., Ecuadorian pyrethrum producer and vice-president of Inexa Co., Ecuadorian pyrethrum extraction firm. He was also a consultant on pyrethrum for Cooper, McDougal, Robertson Co. of London. Most of the past 40 years, he had spent in the essential oil and pyrethrum business, severing his latest American connection about a year ago with Fairfield Chemical Division of Food Machinery.

Over the years, he had been associated with van Ameringen-Haebler (now a division of International Flavors & Fragrances),

R. B. Marr, general manager, Naugatuck Chemicals, Montreal, and outgoing president of Canadian Agricultural Chemicals Association (left), turns over his duties to newly elected president, J. K. Brown, general manager, Green Cross Products (right) at the eighth annual convention and conference of Canadian Agricultural Chemicals Association, Britannia Hotel, Lake of Bays, Ontario, Sept. 14th.

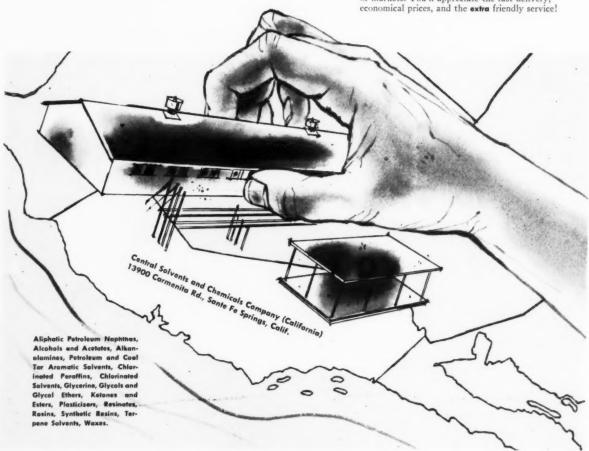


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Toledo, JEfferson 6-3771 • Windson, Ontario, CLearwater 2-0933

Ungerer & Co., Prentiss Drug and Dodge & Olcott. He introduced D & O to the pyrethrum business, this division of D & O being subsequently sold to National Distillers. Today, the division is the Fairfield Chemical Divison of Food Machinery.

Mr. Stoddard was a prolific writer having contributed many articles to the chemical press. In his earlier days, he was editor of a weekly drug trade paper, "Drug Trade Weekly." He graduated in chemistry from Clark University, Worcester, Mass. He is survived by his widow, Mrs. Polly Stoddard and two sons. His eldest son, John Stoddard, is a vice-president of Prentiss Drug & Chemical Co., New York.

National Chemical Expands

Ground has been broken for a major addition to the plant of National Chemical Laboratories of Pa., Inc., Philadelphia, it was announced last month by Alfred Pollack, the firm's president.

National's manufacturing and warehousing facilities will be greatly expanded by this addition, according to the announcement. The firm is also adding tankage facilities for 200,000 gallons to its present plant.

National Chemical Laboratories manufactures disinfectants, cleaners, soaps, and detergents. The line is sold through jobbers of maintenance equipment and sanitary supplies.

R & H Raises Price

A price advance of one-half cent a pound for all quantities of alkylphenols, chemical intermediates used in producing nonionic detergents, was announced late last month by Rohm & Haas Co., Philadelphia, effective October 1. The bulk price for octylphenol is 21½ cents a pound, and nonylphenol and dodecylphenol are 20 cents a pound each in bulk quantities.

This is the first increase in this group of materials since early 1958 and reflects increased materials and manufacturing costs.

USDA Clears Malathion

Premium grade malathion in pressure packaged products has just received label clearances by the U. S. Department of Agriculture, it was announced last month by American Cyanamid Co., New York. Technical malathion has had such clearance for some time. The premium grade is a low odor material. A wider potential field in the household aerosol insecticide market has been opened for malathion by this development.

The USDA clearance covers one, two, and four per cent pressure packaged formulations of premium grade malathion for indoor control of flies, cockroaches, mosquitoes, and other small flying insects, and for control of carpet beetles in dry milk processing plants.

Some 15 formulations containing premium grade malathion will be registered next year, according to American Cyanamid's expectations.

Expands Argentine Plants

Pilot plant production was started recently in the new factory of Givaudan Argentina S.A., as announced by Leon Givaudan, president of the newest manufacturing member of the international Givaudan organization.

Organized in 1955 to serve the expanding soap, perfume, and cosmetic industries of the Argentine, the new plant is located on

Givaudan Argentina, S.A., plant in Bernal where pilot plant production got underway recently.



a 30-acre plot 20 miles from the Argentine capital.

In Bernal, a suburb of Buenos Aires, compounding and research operations are already being conducted in a modern building owned by the company. All compound requirements of Argentine customers can be fulfilled with allowances for future expansion. An analytical laboratory is also nearing completion. Additional property has been acquired in the plant vicinity to facilitate the building of private homes.

Abrams to J. B. Williams

George Abrams has joined J. B. Williams Co., New York, as vice-president and director of corporate development, effective Oct. I, it was announced by Matthew B. Rosenhaus, the firm's president.

Mr. Abrams comes to J. B. Williams from Warner-Lambert Pharmaceutical Go., where he served as president of the cosmetics and toiletries division.

In his new post Mr. Abrams will be concerned with acquisitions and product development, reporting directly to Mr. Rosenhaus, according to the announcement.

Colgate Names Allen

Wallace B. Allen has been named manager of production planning for the household products division of Colgate-Palmolive Co., New York, it was announced recently.

Mr. Allen succeeds N. B. Moulin, who was appointed manager of Colgate's household products marketing organization.

Phosphoric Acid Plant

A \$1,500,000 plant to manufacture phosphoric acid will be built by Olin Mathieson Chemical Corp., New York, at Joliet, Ill. it was announced late last month.

Edward Block, senior vicepresident and general manager of the firm's chemicals division, said that the capacity of the new plant will be approximately 50,000 tons a year. The phosphoric acid will be a 75 per cent concentrate.



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cigarettes, and an emollient in milady's cosmetics.

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JEFFERSON CHEMICALS

Lever Expands Merchandising

M eRCHANDISING activities of the Lever and Pepsodent divisions of Lever Brothers Co.,

of toilet soaps and the "air-wick" line.

The Pepsodent manager is



William W. Prout

New York, have been broadened to meet the increase and variety in the company's growing line of products, it was announced recently.

The changes, all on a managerial level, were effective August 29. The Lever division, which formerly had two merchandising managers, now has three, each responsible for a distinct category of products. The Pepsodent division continues to have one.

The three managers are: William W. Prout, in charge of washday products; E. L. Whitney, in charge of dishwashing and household liquid cleaner products; and Charles E. Palmer, in charge

Charles E. Palmer





E. L. Whitney

Richard E. Baiter. He formerly was merchandising manager for toilet soaps in the Lever division.

Mr. Prout, who has been a merchandising manager in the Lever division since June, 1954, was formerly an associate director of advertising and promotion for General Foods Corp. Mr. Whitney was vice-president and account executive with Norman, Craig & Kummel, Inc., before joining the Lever division in June, 1959. Mr. Palmer joined the company in 1952 as a Pepsodent division manager. He has been associated with Container Corp., Schenley Industries, and Whiteford Paper Co. In July, 1959 he was appointed mer-

Richard E. Baiter



chandising manager for the Pepsodent division.

Columbia Wax Distributors

Columbia Wax Co., Glendale, Calif., announced last month that it has selected three new distributors for Columbia floor care products in New Orleans, Amarillo, Tex., and Hawaii. Appointment of the new distributors increases the number of distributors to 26 and extends the Columbia marketing area from the Pacific to the Mississippi.

Crescent Sanitary Supply Co. in New Orleans, Time Chemical and Janitor Supply Co., Amarillo, Tex. are handling the distribution of Columbia products in their cities. Theodore H. Davis Co., Honolulu, Hawaii is handling Columbia products in the Hawaiian islands.

C-P Expands Warehouse

Colgate-Palmolive Co., New York, announced recently that it has broken ground for a 17,000 square foot addition to the toilet articles division warehouse at its Kansas City, Kans. plant to speed service for the firm's midwestern customers.

Finished goods will be stored in the one-story, 81 x 211 foot annex to be readily available to the nearby shipping operations. The building is expected to be ready for use late this year.

Rapp Elected Vice-Pres.

J. Cy Rapp, chief executive officer of Tidy House Products Co., Shenandoah, Ia., marketers of a line of household cleaning products and a division of Pillsbury Co., Minneapolis, Minn., was elected a vice-president of Pillsbury Co. last month.

Mr. Rapp was president of Tidy House when it became a division of Pillsbury earlier this year. As a founder and former co-owner of Tidy House, he participated in its growth from a basement sideline to a \$6 million a year business.

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It's whiter, cleaner, tints easier - more uniformly, dissolves fast.



CHEMICAL COMPANY

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Amorosi Heads Norda Unit

Norda Essential Oil and Chemical Co., New York, announced late in September the ap-



Leo J. Amorosi

pointment of Leo J. Amorosi as director of its essential oil and aromatics divisions.

Mr. Amorosi joined Norda in 1944 after graduating from St. John's University, Brooklyn, N. Y.

Perry Appoints Flatow

Appointment of R. E. Flatow & Co., Oakland and Los Angeles, Calif., as west coast representatives for Perry Brothers, Woodside, N. Y. manufacturer of perfume bases, was announced recently. Flatow maintains both office and warehouse facilities in Oakland and Los Angeles.

IFF Names Reid Controller

Appointment of Herbert G. Reid as controller of International Flavors & Fragrances, Inc., New

Herbert G. Reid



York, was announced early last month by Charles P. Walker, president.

Prior to his appointment, Mr. Reid was associated with the Price Waterhouse accounting company for 10 years.

Stepan Advances Prices

Stepan Chemical Co., Edens & Winnetka, Northfield, Ill., recently announced an increase in dodecyl benzene sulfonic acid prices, effective Oct. 1. New prices for "Stepan Sulfonic 100" range from \$0.1425 per pound in tankcars to \$0.175 in less truckloads. "Stepan Sulfonic 90" is now priced from \$0.1425 per pound in tankcars to \$0.1725 in l.c.l. and less truckloads.

All prices are f.o.b. Chicago. The materials come in 500 pounds, net, open head lined steel nonreturnable drums.

Mark M. Biddison Dies

Mark M. Biddison, 68, former president of General Chemical Division of Allied Chemical Corp., died Sept. 18 in Sarasota, Fla., where he had lived since his retirement in 1957. Mr. Biddison, whose career with General Chemical spanned 39 years, was president from 1952 to 1955. Previously he had served as executive vice-president and as a vice-president for eight years.

General Chemical experienced its most active growth period during the post-war years under Mr. Biddison's leadership, according to the company. Numerous major developments during this period included the rapid commercialization of the "Genetron" line of fluorinated hydrocarbon propellants.

Mr. Biddison joined General Chemical's sales department in 1918, later became manager of the Cleveland office and division sales manager. In 1934 he was advanced to assistant general manager and later to general manager. He became a vice-pres. in 1947.

Mr. Biddison is survived by his wife, Mary Ellen, and Mark.

W. F. Fischer Dies

William Franklin Fischer, former vice-president and sales manager of Magnus, Mabee and



William F. Fischer

Reynard, Inc., New York essential oil and aromatics house, died Sept. 15 after a long illness. Having started with MM&R in 1907 as office boy Mr. Fischer served the firm in various capacities until his retirement several years ago.

Witco Advances Gladstone

Promotion of M. M. Gladstone to manager of the Emcol organic chemicals division, of Witco Chemical Co., New York, was announced last month.

Dr. Gladstone is in charge of Emcol marketing, new products development, and coordination of production and sales. Before his advancement, he was assistant technical director of the organic chemicals division.

M. M. Gladstone





Indeed we are busy—and that means business is good—but we're never too busy to tackle any new problem. Old accounts working on new products... new accounts being availed of our special facilities... these keep our large and experienced staff constantly on the alert—constantly devising fresh approaches to the age-old problem of making the customer's finished soap, toiletry or household specialty more salable through the use of attractive scent. Our success in doing this for numberless others is our best assurance that we can do it equally well for you. Why not call in our representative or a member of our technical staff for consultation?



FRITZSCHE BROTHERS, Inc.

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Branch Offices and *Stocks: Atlanta, Ga., Boston, Mass., *Chicago, III., Cincinnati, Ohio, Greensboro, N. C., *Los Angeles, Cal., Philadelphia, Pa., San Francisco, Cal., St. Louis, Mo., Montreal and *Toronto, Canada; *Mexico, D. F. and *Buenos Aires, Argentina. Plants: Clifton, N. J. and Buenos Aires, Argentina.



Henne Sales Vice-President

Ed Henne has been appointed vice-president in charge of sales of Worrell-Consolidated Lab-



Ed Henne

oratories, Inc., St. Louis, according to an announcement made last month by J. A. Brereton, president. Mr. Henne is the president's immediate assistant in charge of sales promotion, marketing, and product development.

Mr. Henne was formerly sales promotion and advertising director of Forest City Manufacturing Co., St. Louis. Specializing in the production of "Perma-Tection" floor care and sanitation products, Worrell-Consolidated Laboratories, Inc., has manufactured industrial and commercial products since 1895.

C-P Sales Representative

Robert R. Holiman, Jr., was recently appointed a sales representative for Colgate-Palmolive Co., New York, in the Texarkana, Tex., area. Mr. Holiman has a degree in business management from the Arkansas State Teachers College.

Adopts New Trade Name

A new name has been adopted by New Jersey Chemical Co., Lyndhurst, N. J., for its line of chemical specialties, it was announced late last month by B. F. Natoli, president. The new name, "Oxford," will be used for liquid and paste waxes, floor cleaners, polishes and disinfectant products

made by New Jersey Chemical Co. These items were formerly sold under the brand name of "Jersey." The complete line is also available under private label.

New Foreign P & G Unit

Procter & Gamble Co., Cincinnati, recently announced it was taking preliminary steps toward formation of a subsidiary company in West Germany. This, P & G says, would complement its activities in the European Common Market since West Germany is the only member country of the trade group in which its products are not widely sold. Site of the new subsidiary was not disclosed.

Southern ESA Meeting

The 35th annual meeting of the Southeastern Branch of the Entomological Society of America is scheduled for January 23-25, 1961, at the Admiral Semmes Hotel in Mobile, Ala.

Schafer Receives Award

Harold Schafer, head of Gold Seal Co., Bismarck, N.D., makers of Gold Seal "Glass Wax" and other cleaning products, received an award last month for having risen from humble beginnings to success in industry.

The awards – framed certificates—were presented in New York by Free Enterprise Awards Association, Inc., which has been making them since 1952. The association was formed in 1949 to publicize the free enterprise system.

Schwan to Schenectady

Appointment of Robert L. Schwan as product sales manager, Schenectady Varnish Co., Schenectady, N. Y., was announced recently by John B. Emans, vice-president—marketing, Formerly affiliated with National Lead Co., Catalin Corp. of America and Varcum Chemical Corp., in technical sales and sales management positions, Mr. Schwan now makes his headquarters at the company's main office, Congress and 10th Sts.

CSC Nitroparaffins Dept.

Commercial Solvents Corp., New York, last month announced creation of a separate marketing



Frank E. Maple

department to handle the nitroparaffins. The new unit consists of a group of experienced industrial chemical salesmen and technical service specialists devoting their full time to the exploitation of nitroparaffins.

Frank E. Maple was named sales manager of the new department. He has been closely associated with the development of nitroparaffins for over 20 years. Previously he had been sales manager of CSCs industrial chemicals sales department.

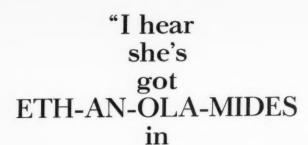
C-P Appoints Maloof

Richard Maloof was appointed to the research and development department, toilet articles division, Colgate-Palmolive Co., New York, it was announced last month by L. D. Apperson, director of research and development for the division.

Mr. Maloof joined the staff of the bacteriology laboratory at the Colgate-Palmolive laboratories in Jersey City, N.J.

Weed Control Conference

The 15th Annual Meeting of the Northeastern Weed Control Conference will be held January 4-6, 1961, at the Hotel New Yorker in New York City, it was announced last month.



her kitchen!"

Of course she does, ladies. But you can relax. Smart, technically alert soap and chemical specialty manufacturers have stocked not only her kitchen, but nearly every other room in her house with soaps, detergents, waxes or cosmetics containing ethanolamides.

In detergents, these important compounds act as foam stabilizers and viscosity boosters. They're used as dispersing agents and corrosion inhibitors to permit packaging of institutional cleaners in mild steel. You'll find them in textile softening agents, wool scouring and cotton washing formulations.

ALLIED CHEMICAL ETHANOLAMINES—
used in preparing ethanolamides— are manufactured by an improved process which
assures purity and high quality. Write or phone
for specifications or technical assistance in
formulating ethanolamines into your operation.

For specifications and local offices, see our insert in Chemical Materials Catalog, pages 475-482 and in Chemical Week Buyers Guide, pages 37-44.

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New Givaudan Sandalwood Replacement

SANDALWOOD oil replacement suitable for use in soaps, detergents, and pressure packaged formulations has just been introduced by Givaudan-Delawanna, Inc., New York. It is said to be the first single aromatic offering the compounder the characteristics of natural sandalwood oil. A new polycyclic alcohol, "Sandela GD", the replacement is available in commercial quantities at a price currently less than one third the market price of its natural prototype. Good shelf stability and persistence is claimed for the new product which comes as a clear colorless liquid.

Cakes of soap containing 0.5 and one per cent of "Sandela GD" were shelf tested, some of them with exposure to daylight and air. The perfumer may at first detect a slight difference between soaps containing the replacement and the soaps containing sandalwood oil. However, after several months' storage, "Sandela GD" persists without loss of any of its original character, whereas sandalwood oil has lost most of its initial odor, Givaudan reports.

Perfume compounds for soap containing varying amounts of the replacement were compared with identical blends containing equal concentrations of the natural product. Both on the blotter and in soap cakes the blends were judged to be identical.

Additions of 0.5 per cent of "Sandela GD" to powdered soaps are reportedly stable to oxidation and evaporation in this medium and are said to be far more stable than sandalwood oil.

In liquid and powdered detergent formulations, including heavy duty types, the new odorant was tested at concentrations of 0.5 per cent. It was found stable and unchanged at alkalinities up to pH 11 at elevated temperatures, Givaudan reports.

"Sandela GD" is suitable for incorporation in pressure packaged products, according to the manu-

facturer. Satisfactory solubility and stability in propellants, odor stability, corrosion characteristics etc. are claimed for the product in this medium. Low permeation rate and stability to air suggest its use in products packaged in polyethy-

Wide application of the new aromatic is envisaged in cosmetics and in perfume extracts, colognes and other specialties.



Gordon S. Lang (above), left, Connecticut Chemicals, Ltd., Toronto, with trophy Gordon S. Lang (above), left, Connecticut Chemicals, Ltd., Toronto, with trophy he received as low gross winner of first golf tournament of Canadian Manufacturers of Chemical Specialties Assn., being congratulated by George Flemming, Canadian Chemical & Equipment Co., Montreal, former president of CMCS. Mr. Lang had a 72. In spite of heavy rains and thunder storms, 41 golfers played in the tournament, which was held Aug. 29, at Highland Golf and Country Club. Aurora, Ont. Fifty-four persons attended the dinner.

Tye M. Lowe, American Can Co. of Canada, Ltd., Hamilton, Ont., won the Precision Valve Co. trophy with a low net of 72.

Other prize winners included: Joseph McCullugh, Consolidated Alcohols, Ltd., Montreal, second low gross with a 79; A. Brecce, Givaudan-Canada, Ltd., second low net with a 73; Lloyd Specks, Fritzsche Brothers, Canada, Ltd., third low gross (86): Vern Beer, third low net (75).

(86); Vern Beer, third low net (75).

Also, longest drive (285 yards), Cal Johnson, Bate Chemicals, Ltd., Montreal; highest score on third hole, Bob Walingnatz, Chemcrest Corp., Detroit; Ron Toy. highest score on third hole, Bob Walingnatz, Chemcrest Corp., Detroit: Mon Toy, "most honest" golfer: Bruce Sleeman, DuPont of Canada, Ltd., Toronto, lowest score on 6th hole: closest to pin, John Murphy, Continental Can of Canada, Ltd., "best dressed" golfers (in the rain), Kel Doyle, Cr. wn Cork & Seal Co., Toronto, and Ab Robins, Cartier Chemicals, Ltd., Lach ne; holes-in-one, Gerry Durant, Aerocide Dispensers, Ltd., and Dr. G. V. Jansen, S. C. Johnson & Son, Ltd., Brantford, Ont. Bottom row: In photo at left Ralph R. Legate (left) of Canadian representative of Precision Valve Corp., shakes hands with George Flemming, chairman of the first CMCS golf tournament. In photo at right Tye M. Lowe (center), American Can Co. of Canada, Ltd., receives congratulations from Mr. Legate on winning Precision Valve trophy with a low net of 72. Mr. Flemming looks on.

Precision Valve trophy with a low net of 72. Mr. Flemming looks on.



The best – QUATERNARY AMMONIUM COMPOUNDS

ARE FINE ORGANIC QUALITY

NEO GERM-I-TOL

Higher Alkyl Dimethyl Benzyl Ammonium Chloride . . . supplied as 50 % lightly colored water-isopropanol solution.

A NEW GERMICIDE with superb germ killing power. In water with hardness exceeding 600 parts per million, Neo Germ-I-Tol retains the outstanding germicidal effectiveness.

CETYL PYRIDINIUM CHLORIDE U. S. P. XVI

For lozenges and mouth washes. Approved by F.D.A.

CETOL-CETYLON

Cetyl D.methyl Benzyl Ammonium Chloride . . . supplied as a white 100% active, free-flowing powder. Purity is exceptional.

A HIGHLY POTENT GERMICIDE with uses similar to Neo Germ-I-Tol. Cetol is available in forms specifically prepared for pharmaceutical lozenges, mouthwashes and the solubilizing of thyrotricin. Because it is a dry powder, Cetol is easy to formulate and offers a saving in freight cost. It is readily soluble in water . . . and is compatible with most non-ionic detergents. F.D.A. approved for internal use.

BROMAT-CETAB

Cetyl Trimethyl Ammonium Bromide (also known as Cetrimide) . . . supplied as a white 100% active, free-flowing crystalline powder.

HIGHEST GERM KILLING POWER available in any commercial quaternary compound. Bromat is an exceptional industrial, cosmetic and toilet deodorant.

SD-75

Higher Alkenyl Dimethyl Ethyl Ammonium Bromide . . . supplied as a paste in 75% concentration and as a 10% water solution.

A HIGH-STRENGTH ALGICIDE for swimming pools . . . and for slime control in air conditioning and cooling towers.

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That Are Designed for Specific Uses

BRETOL (Cetyl Dimethyl Ethyl Ammonium Bromide) for dental sanitization and soldering fluxes.
DICHLORAN (Higher Alkyl Dimethyl Dichlorobenzyl Ammonium Chloride) for veterinary trade . . . drinking water of poultry and

general animal husbandry.

GERM-I-TOL (Higher Alkyl Dimethyl Ammonium Chloride) for dairy sanitation, swimming pools and as an all-purpose germicide. STEDBAC (Stearyl Dimethyl Benzyl Ammonium Chloride) 100% active . . . used primarily in aftershampoo hair rinses.

White for catalog, prices, and technical information.

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HEADQUARTERS FOR CUSTOM SYNTHESIS

NON-IRRITATING

at use

MGK Export Manager

McLaughlin Gormley King Co., Minneapolis, Minn., manufacturers of pyrethrum extract and



William D. Gullickson

insect repellents, recently announced appointment of William D. Gullickson as manager of international sales. In preparation for his new assignment, Mr. Gullickson has spent the past year studying the firm's products and processes.

Before joining MGK, Mr. Gullickson held positions with the magazine division of Hearst Corp., and Conover Mast Publishing Co., Chicago.

Milner Acquisition

Dumas Milner Corp., Jackson, Miss., chemical specialties firm, recently purchased Commonwealth Products, Inc., Kalamazoo, Mich., maker of a complementary line of products, as announced by Howard S. Cohoon, Dumas Milner Corp. president.

Dumas Milner Corp., now 10 years old, has expanded from a local company with annual sales of \$300,000 to one with sales and facilities in Latin America and Europe and an annual sales volume in 1959 of \$12 million.

Commonwealth Products is a six-year-old firm whose annual sales last year were \$1 million. Among their products distributed nationally through super markets and grocery stores are "Alumi-Glo," an aluminum cleanser, "Copper-Glo," a copper utensil cleanser, and "Sweet-Aire" room deodorant. Milner will add all of Commonwealth's products to its advertising, increasing its 1960-1961 advertising budget 25 per cent to \$2.5 million.

FTC Hits Rug Shampoos

The Federal Trade Commission last month issued three separate complaints charging the following distributors of rug and upholstery shampoos and applicators with allegedly misrepresenting the cleaning abilities and qualities of their products: Bissell, Inc., Grand Rapids, Mich., E. R. Wagner Manufacturing Co., Milwaukee, Wis., and its subsidiary, Glamur Products, Inc., Syracuse, N.Y., and Glamorene, Inc., Clifton, N.J. They are granted 30 days in which to file answers to the complaints.

The complainants allege that the concerns have falsely advertised that their applicators and shampoos are as effective as professional rug cleaning and that cleaning is accomplished merely by spreading the shampoo or wiping it on and letting it dry.

Bissell is further charged with falsely claiming that its products will: (1) remove every kind of stain that professional cleaners can, (2) give professional-type cleaning at one-tenth the cost, (3) dry clean rugs, and (4) have twice the cleaning power of any other rug or upholstery cleaner.

Armstrong Joins Harshaw

Robert A. Armstrong is now assistant sales manager, fine chemicals, of Harshaw Chemical Co., Cleveland, it was announced last month. His headquarters are at the Hastings-On-Hudson, N. Y., office of Harshaw.

Mr. Armstrong is a member of the Salesmen's Assn. of the American Chemical Industry, and a member and past president of Cosmetic Buyers, Importers & Suppliers. He was formerly with the Goldschmidt Chemical Corp.

Pedretty Joins Cowles

Cowles Chemical Co., Cleveland, announced last month that John P. Pedretty has joined the



John P. Pedretty

firm to serve the newly organized San Antonio, Tex., sales territory. W. J. Schleicher, manager of the laundry products department of Cowles, made the announcement.

Swiss Plant for Johnson

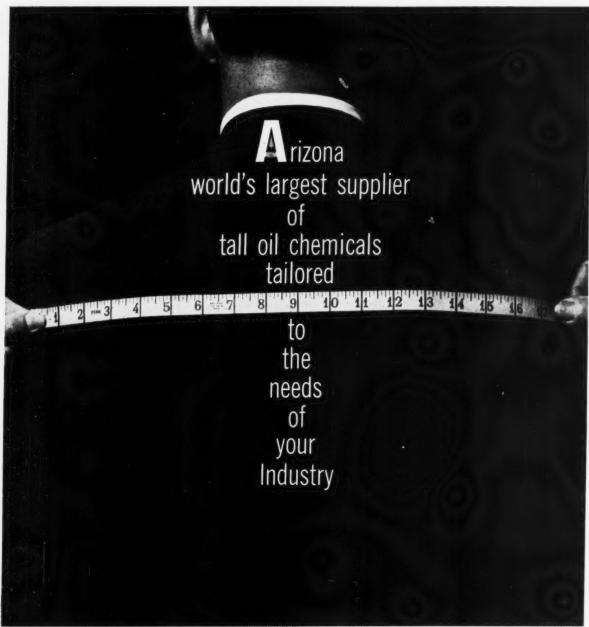
A subsidiary of S. C. Johnson & Son., Inc., Racine. Wis., Johnson's Wax Fabrik, A.G., has been established in Weiningen, a suburb of Zurich, Switzerland.

The new company manufactures and sells a wide variety of household, building maintenance and industrial products, including waxes, polishes, insect repellents and insecticides, automotive maintenance products, and other chemical specialties. For more than 30 years Johnson products had been produced and marketed in Switzerland by a manufacturing distributor.

Monsanto Advances Two

James H. Lum, director of technology for the organic chemicals division of Monsanto Chemical Co., St. Louis, was appointed last month assistant to the president and secretary of the company's executive committee.

Dr. Lum succeeds Shea Smith III, who was appointed to the newly created post of director of economic planning for the company's overseas division.



Soon to be in full production, the new Arizona plant in Springhill, Louisiana is designed to give Arizona even greater fractionating capacity. The new facility assures you faster service plus a continuous supply of the finest quality tall oil products. Arizona research is developing tall oil products perfectly suited to the needs of your industry... products to bring your operation greater efficiency and economy. This new plant is one more example of Arizona's constant effort to bring you the best in tall oil products and services.

Write for formula suggestions and technical data.

ARIZONA CHEMICAL COMPANY

30 Rockefeller Plaza, New York 20, N. Y.

world's largest supplier of tall oil chemicals-

ACINTOL® Tall Oil Products, ACINTENE® and ARIZOLE® Terpene Products

SOAP and CHEMICAL SPECIALTIES

Two Join Seeley & Co.

Louis Pais and Eugene Sturman have joined Seeley & Co., Nyack, N. Y., manufacturers of



Eugene Sturman

fragrances, aromatics, and flavors, as vice-presidents, according to an announcement made last month by Charles B. Smith, president. Both men have been associated with Polak's Frutal Works, Inc., Middletown, N. Y., for the past 14 years in sales capacities.



Louis Pais

Seeley & Co. operates manufacturing plants in Nyack and in Toronto, Canada, and have been manufacturing the past 36 years.

Am. A. C. Names Ward

Harold L. Ward has joined American Agricultural Chemical Co., New York, as market research



Harold Ward

and development specialist, reporting to G. H. Benham, director of research. In his new post Mr. Ward will assist in coordinating the firm's research activities and will work with customers in developing markets for new products.

Mr. Ward will make his headquarters at the company's research facilities in Carteret, N. J.

Emery Appoints Two

Appointment of Joseph J. Raispis and Jack W. Little to the development and service department of Emery Industries, Inc., Cincinnati, was announced last month. Mr. Raispis provides service for Emery's line of acids and synthetic lubricant esters, while Mr. Little handles technical service for the company's line of "Plastolein Plasticizers" and "Metholene" fatty acids.

Mr. Raispis has been with Emery for seven years as a production foreman and chemical engineer. Mr. Little was a customer service engineer with Dow Chemical Co., specializing on polyvinyl chloride resins, before joining Emery.

22nd Premium Show

The 22nd Annual New York Premium Show was held September 12-15 at the Astor Hotel under the sponsorship of the Premium Advertising Association of America.

The association estimates the 1960 volume of premiums at \$2,250,000. Women are still the largest consumer group for premium offers, accounting for 42 per cent of the total. But some trend is seen in premiums for the whole family, now amounting to 26 per cent of the premiums, and offers for men, up to 17 per cent. The juvenile market accounts for the remaining 15 per cent.

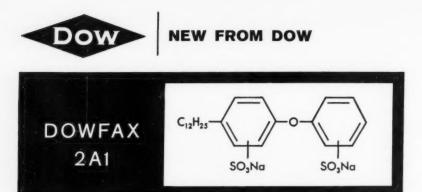
Some of the types of premiums include: coupons, enclosures, reusable containers, premiums banded to the outside of merchandise, and tie-in premiums, where one of the new product is given with one of the old.

Lever Names Agency

Lever Brothers, Inc., New York, recently appointed J. Walter Thompson Co. as the advertising agency for "Hum Laundry Liquid," heavy duty laundry detergent. Lever notes that "Hum," which was first introduced in test markets this past spring, is the first detergent especially designed for modern fabrics.

Fleuroma, Inc., is now occupying its new plant and headquarters building at 43 Dreyer Ave., Long Island City, N.Y., it was announced recently by W. Lengsfelder and E. Poons, principals of the aromatic chemicals and perfuming materials firm. The building, once occupied by a commercial laundry, has undergone extensive renovation since it was acquired by Fleuroma early in 1960. Perfume laboratories and aromatic chemical manufacturing areas are of the most modern space design. The plant also provides for considerable expansion.



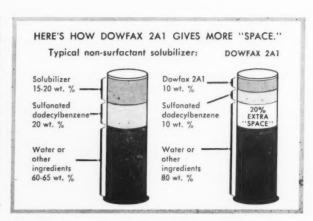


New anionic surfactant gives valuable

"DIVIDEND SPACE"

by eliminating coupling agents

Dowfax 2A1 surfactant exhibits superior solubility and coupling ability. It produces clear, sparkling formulations with "dividend space," the extra "room" usually occupied by non-working coupling agents required to hold some detergents in solution. Dowfax 2A1 has a unique chemical structure that makes it soluble and stable in alkalies and acids and soluble and stable to metal salt build-up. It can be readily defoamed for applications in the fields of heavy duty liquids, alkaline cleaning, and many others. Write for data and samples. The Dow CHEMICAL COMPANY, Midland, Michigan, Technical Service and Development, Department 601 ER 10.



See "The Dow Hour of Great Mysterics" on TV.

THE DOW CHEMICAL COMPANY . MIDLAND, MICHIGAN

Olin Mathieson Ups Two

Appointment of two corporate vice-presidents of Olin Mathieson Chemical Corp., New



Fred J. Stock

York, was announced early last month by Stanley de J. Osborne, president and chief executive officer.

They are Fred J. Stock, vicepresident of marketing for the Squibb Division, and A. T. Zodda, vice-president of the firm's international division.

Mr. Stock joined O-M in 1952 as general manager of intermediates division. In 1954 he was made general manager of the Squibb chemicals division, and in 1955 vice-president and assistant general manager of the Squibb Division. He became vice-president of marketing in June of this year.

New Airkem Distributor

George H. Munn acquired the Philadelphia distributorship for the sale of Airkem sanitation maintenance products and odor counteractants, it was announced last month by Airkem, Inc., New York. His organization's name is Airkem Sales of Philadelphia, located at 19 South Church Lane, Lansdowne, Pa. Mr. Munn's territory includes the Philadelphia area and parts of New Jersey and Delaware.

Mr. Munn has had more than 11 years' experience in sales and sales management. Previously he was associated with Safeguard Corp. as sales manager, and Eversharp Corp.

Enjay Expands Benzene

Enjay Chemical Co., New York, a division of Humble Oil & Refining Co., announced last month a 60 per cent expansion of the Baton Rouge, La., benzene plant. The company reported that benzene capacity will be increased from 15 to 24 million gallons per year by the end of 1960. Detergents and insecticides are among the end products that use substantial quantities of benzene.

Hooker Elects Three

F. Leonard Bryant, a vicepresident of Hooker Chemical Corp., Niagara Falls, N. Y., was elected executive vice-president and a director of the firm at a meeting of the board of directors held in New York last month.

Elected directors at the same time were: Thomas F. Willers, a vice-president, and Werner P. Gullander, executive vice-president and a director of General Dynamics. Both Mr. Bryant and Mr. Willers have also been named to the executive committee of the board of directors.

Mr. Bryant has been with Hooker since 1935. He has held various supervisory posts, including plant superintendent at Hooker's Niagara Falls plant. Since 1959 he has been in charge of corporate research, marketing, and general development.

F. L. Bryant



Rosenberg in Geigy Post

Geigy Chemical Corp., Ardsley, N.Y., recently announced that Milton Rosenberg has joined



Milton Rosenberg

its industrial chemicals division, customer service department, as product manager in charge of surfactants.

In his new post Mr. Rosenberg directs the activities of a laboratory group in applications research and development on acylated amino acids and other Geigy surface active agents. He was formerly associated with Gulf Research Development Corp.

UCC Appoints Four V-P's

Announcement of appointment of four new vice-presidents of Union Carbide Chemicals Co., a division of Union Carbide Corp., New York, was made last month by E. E. Fogle, president of Union Carbide Chemicals.

The officers are: Richard F. Brown, in charge of sales; Robert L. Duncan, in charge of product marketing; Thomas R. Miller, responsible for research and development; and Arthur P. Moss, vice-president and works manager.

Colgate Researcher Dies

William H. Meyer, 62, a member of the research and development department of Colgate-Palmolive Co., New York, died Sept. 6 at his home in Jersey City, N.J. Mr. Meyer had been employed by Colgate-Palmolive for the past 25 years.

EMPILAN MAA

SOLUBILISING NON-IONIC BOOSTER FOR LIQUID DETERGENTS

A new 100% active non-ionic foam and detergent booster specially developed for liquid detergent formulations. Specially economical because it also has a solubilising effect which permits a reduction (in some cases amounting to complete elimination) in requirements of conventional solvents.

Empilan MAA leads to cheaper liquid detergents with better balanced cleaning and foaming properties. Essentially neutral, it is compatible with anionic components and solubilisers (e.g. Nansa SS, Eltesols) normally used in liquid formulations. Please write for technical leaflet.



Marchon

Marchon Products Limited, Whitehaven, England

Member of the Abright & Wilson Group of Companies

U.S. AGENTS: Aceto Chemical Co. Inc., 40-40 Lawrence Street, Flushing 54, New York, Telephone: INdependence 1-4100.

CANADIAN AGENTS: Tennant & Michaud Co. Ltd., Suite 905, 321 Bloor Street East, Toronto and 4795 St. Catherine Street West, Westmount, Montreal 6.

MAR 1138



ADD 30% MORE BULK TO YOUR BOX OF DETERGENT AT NO EXTRA COST Put Hooker

spray-dried phosphates into your detergents and you get 20% to 30% more bulk (depending on the amount used) without increasing weight or cost. That's because a tiny air bubble floats inside each phosphate granule.

This bulky phosphate bulks up your mixture. You get a bigger box, with more sales attraction.

FREE-FLOWING The high air content of spray-dried phosphates keeps them always loose. They dissolve two or three times faster than common forms.

MEETS ALL NEEDS Choose the spray-dried phosphate

that serves you better—sodium tripolyphosphate or tetrasodium pyrophosphate.

For more information on how to make better detergents by using these phosphates, write to the address below.

You can get the following in regular density: disodium phosphate, trisodium phosphate, sodium hexametaphosphate, and sodium tripolyphosphate.

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PHOSPHORUS DIVISION, BOX 326, DEPT. SC-10
Jeffersonville, Indiana
Sales offices: Chicago, III. • New York, N. Y.



OCTOBER, 1960

IF YOUR DETERGENT EMPLOYS

Alkanolamides · Alkyl Aryl Sulfonates · Lauryl Sulfates SURFACT-CO CAN LOWER YOUR FORMULATION COSTS

Surfact-Co now supplies
the detergent industry's basic surfactants
at the lowest price
per pound of active ingredient.
Our detergent scientists
help you select the right
surfactant at the right cost
for your formulation.
Tech Service includes product development,
formulation and production assists
— until the problem is solved.
What's your application,
what's the problem?
Check with Surfact-Co.

EIGHT LEADING SURFACTANTS BY SURFACT-CO

WRITE FOR TECH BULLETIN AND FORMULATION SUGGESTIONS

PRODUCT	USE ASPECTS	APPLICATIONS
DODECYL BENZENE SULFONIC ACID (Surco DDBSA)	Ammonia or diethanolamine neutralization. Dry Soda Ash- Sodium Tripolyphosphate neutralization	Kerosene degreaser and cleaner • Floor cleaner- coupling agent. Low cost car shampoos. Pourable gel concentrate
AMMONIUM NONYL PHENOXYETHYLENE SULFATE (Surco 57)	Auxiliary foamer and detergent in liquid preparations	Dish detergents • car shampoos
DESALTED SODIUM ALKYL ARYL SULFONATE (Surco SF42M)	Contains minimum salt in ethyl alcohol solution	Glass rinses • Liquid dish detergents • General synthetic cleaner • Oven, exhaust fan, deep fry cleaner • Clarifying agent for ammonium alkyl aryl sulfonate solutions
LAURIC DIETHANOLAMIDE (Surco Stabilizer #2)	Standard foam stabilizer and thickener	Low cost shampoos or bubble baths • Liquid dish detergents • Lotion-type shampoo concentrates
COCONUT DIETHANOLAMIDE (Surco Coconut Condensate)	Predominantly non-ionic. Ef- fective with cationics	Base material in high-active floor cleaner con- centrates • Glass cleaner and rinse • Thickener
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Chemist: Experienced in the production of soap, fatty acids, glycerin. Plant located in the southeast. Address Box 493, c/o Soap.

Wanted: Jobbers and distributors for miniature guest soaps, wrapped and unwrapped. Write for samples and prices to Box 518, c/o Soap.

Sales Superviser: Experience preferred in sanitary maintenance chemicals and janitorial supply field. Must be able to conduct demonstrations, train and assist new men and be a strong closer. This is a position which calls for a man that is not afraid of hard work but one that desires the opportunity to make a permanent position for himself in a rapidly growing organization. Remuneration depending on qualifications and ability. Address Box 507, c/o Soap.

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Positions Open

Flavor Salesman Wanted: Excellent opportunity with well known aromatic house for salesman in flavor sales. Experience in New Jersey and Philadelphia area preferred. Salary and commission. Address Box 519, c/o Soap.

Specialty Salesman: Account opener wanted for maintenance and industrial chemical compounds. Industrial consumer sales — established 1927. Salary + % + expenses to qualified man. Send experience and resume to Troy Industrial Products, 2249 E. 38 St., Los Angeles 58, Calif.

Chemist Wanted: Must be experienced in formulating specialized cleaning compounds, liquid detergents and disinfectants. Growing company in southwest since 1926. Excellent opportunity. Salary open. State Chemical Co., P. O. Drawer 310, Amarillo, Texas.

Wanted \$10,000 Plus Salesman: Who knows the distributor and has a good knowledge of sanitary maintenance products to sell for reputable manufacturer of high quality products reasonably priced and sold exclusively to distributors. For followng territory: Ohio, W. Va., Va., Washington, D. C., Maryland, North & South Carolina. Replies confidential. Write Michael Bixon, Pres., 1163 Southern Blvd., New York 59, N. Y.

Situations Wanted

Chemical Sales: 7 years experience selling surfactants, emulsifiers and industrial chemicals to manufacturers of all cleaning products, chemical specialties, cosmetics, food, agricultural pesticides, insecticides and various technical processing industries. Also sold cutting oils, dyes, pigments and leather chemicals. Prefer eastern representation. Address Box 522, c/o Soap.

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Long established highly reputable manufacturer FINEST QUALITY bulk private label SOAPS (liquid, jelly, powder) for Janitor Supply, Beauty Supply, Cosmetic. Pharmaceutical trades, compounders and converters. All territories open. Liberal commission arrangement. No objection other lines (non-conflicting). Applications confidential. Address Sales Manager.

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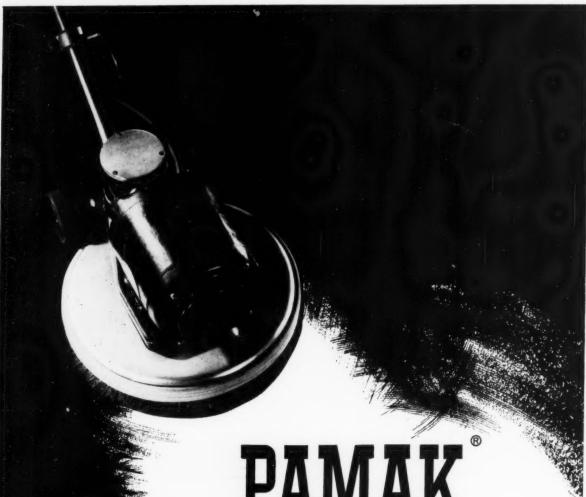
Situations Wanted

Organic Ph.D.: Over 20 years synthesis, development organic chemicals, specialties, waxes, detergents, disinfectants, lotions, skin cleaners, polymers, research direction. Consider partnership, participation, or laboratory direction plus. Address Box 520, c/o Soap.

Product Development Chemist: Having diversified experience in cosmetics and specialties desires responsible non-bench type position with progressive firm offering opportunity for advancement. Eastern U. S. Address Box 521, c/o Soap.

Management Specialist: Graduate engineer, 30 years old. Experienced in manufacturing, distribution, cost reduction and purchasing of synthetic detergents, soaps, fatty acids and allied chemicals. Seeking responsible position with good future. Address Box 523, c/o Soab.

Sales Manager Available: Industrial maintenance products. Presently employed but seeks wider opportunity. Offers 15 years background in sales management. Experienced in both distributor and direct sales. Admirable record in developing and training salesmen. Major success with developing leading accounts in conjunction with salesmen and through own efforts. Can build a sales organization from scratch or expand and educate established sales staff. Will relocate for job offering right opportunity. Address Box 524, c/o Soap.



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Organic Chemist: Biophyscist: Ph.D. and 37 years old. 14 years in teaching, academic research and publications. Experience in organic syntheses and use of tracer methodology in the study of organic, biochemical and biophysical mechanisms. Four years consulting in chemical specialties industry. Desires position offering good beginning and future professional and financial structure. Prefer southwest USA. Address Box 508, c/o Soap.

Sales Merchandiser: Formerly sales manager national company seeks one or two lines of rated companies with established volume in metropolitan New York and New Jersey market. Excellent jobber contacts with all types of institutional suppliers. Address Box 496, c/o Soap.

Production Chemist: Graduate chemist (B.S., M.S.). 6 yrs. with leading textile auxiliary manufacturer (research, production, technical service) mostly detergents and quaternaries. 3 yrs. as chief chemist for quality control and development for widely known janitor supply house. 11 yrs. as research chemist, then production supervisor and quality control head for leading sanitary chemicals firm. Several publications and patents in bacteriology and chemistry. Address Box 527, Soap.

See Special Offer Page 202

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Wanted: New or used equipment for making deodorant and wall blocks, also new or used stainless steel steam jacketed mixing tanks. Address Box 513, c/o Soap.

Dehydrated Plant: Has open time available on spray and tray drying equipment for contract, custom or experimental drying of soaps, detergents, chemicals and drugs. H. Gartenberg & Co., Inc., 412 W. Pershing Road, Chicago 9, Illinois.

Now Available: Third edition Handbook of Pest Control by Mallis. Price \$12.50. Outside U. S. add 50ε for postage.

Business Buy/Sell

For Sale: Going soap plant in Chicago. A bargain for anyone immediately interested. Address Box 526, c/o Soap.

Soap Plant Wanted: To buy or rent soap plant for boiled soaps, bar, chips, etc. Reply with full particulars, in strict confidence. Address Box 525, c/o Soap.

Wanted to Buy: Chemist-production manager, top man in waxes, detergents, etc., familiar with chemical compounding for sanitary and maintenance field seeks to buy outright or interest in existing profitable chemical specialties business or to establish a new business with well-qualified salesman active in the field. Prefer eastern seaboard. Address Box 512, c/o Soap.

For Sale

Attention Wax Mfrs.: We can supply you with A-C Polyethylene 629 and or Epolene "E" emulsions in 30% solids ready for use in your wax or waxless floor finish formulations. Various phenolic resin emulsions are also available. Dura Wax Company, Inc., McHenry, Illinois.

For Sale: MRM, 6 spout, vacuum liquid filler; Whirlwind portable screw capper; Karl Kiefer, Visco, 7 spout, rotary filler, San-I-Tank, stainless steel; 50 gallons, jacketed, ¼HP, explosion proof agitator; Stainless steel kettle, 55 gallons, jacketed. Sell us your surplus equipment. Irving Barcan Co., 249-51 Orient Ave., Jersey City 5, New Jersey.

For Sale: Bowen pilot T-304 SS spray dryers, Sharples #16V inconel soap centrifugals, Hope single piston stainless filler. Perry Equipment Corp., 1410 N. 6th St., Phila. 22, Pa.

For Sale: 3 and 4 roll granite steel roller mills. Plodders. Grinders. Chippers, Crutchers. Slabbers. Cutting tables. Kettles. Filter presses. Mixers. Sifters. Foot and power soap presses. Partial listing. We buy surplus equipment. Stein Equipment Co., 107 — 8th St., Bklyn. 15, N. Y.

For Sale: By I. E. Newman, 818 W. Superior, Chicago, Ill., CH-3-1425. Mixers. Marion-Munson, sizes 50# to 10,000# Crutchers—1,000-8,000#; Wrapper Type S; Auto Cutting Table; Bucket.Elevators, Mills, Cutters, Crushers. Soap Equipment. Prices on request.

For Sale: 78 page listing of "Surfactants" (1958) Price \$2.50. Write John W. McCutcheon, 475 Fifth Ave., New York 17.

Correction

On page 20 of the September issue of Soap and Chemical Specialties we inadvertently pub-



Edward A. Bush

lished a photograph of Edward A. Bush with a news item about his brother, B. T. Bush, Jr. Also in the news item, B. T. Bush, Jr., was incorrectely referred to as E. T. Bush, Jr. Because of the confusion between first initials we erroneous-

ly stated that E. T. Bush was "formerly with Dragoco, Inc., New York."

Actually, Edward A. Bush,



Burton T. Bush, Jr.

who became associated with Dragoco, Inc., New York aromatic chemicals firm, as sales manager in 1956, remains in that position.

Burton T. (Tom) Bush, Jr., recently joined the sales staff of Albert Verley & Co., Linden, N. J.

Previously he had been with the aromatics division of Hoffmann-LaRoche, Inc., Nutley, N. J., since its inception early in 1957.

We apologize to both men and to their firms for any embarrassment our news items may have caused. It is particularly regrettable since we have known both Ed and Tom Bush, as well as their father, B. T. Bush, so many years.

Wins CSMA Golf Tourney

Leonard G. Cannella of Continental Can Co., New York, won the second golf tournament of this season sponsored by the Chemical Specialties Manufacturers Assn. The mid-western tournament won by Mr. Cannella with a low gross score of 74 was held Sept. 20 at Medinah Country Club, Medinah, III. There were 115 participants in the golf tournament and 150 persons attended the dinner.

Second to fifth low gross winners and their scores were: John Matarrse, 77; T. Dell, 78, S. B. Penick & Co.; Eugene McCauliff, 78. Glyco Products Co., New York, winner of the first CSMA tournament; and John Hulten, 79, Union Carbide Chemicals Co., New York.

B. Pass was winner of first low net with a score of 65. Second low net was won by Robert Peterson, Peterson Packaging and Filling Corp., Danville, Ill., with a score of 66.

Third to 10th low net winners were: Earl Christiansen (67); William Ackley (67), International Flavors & Fragrances, Chicago; Jules Hegler (68), Peterson Packaging & Filling Corp.; C. B. Ricca (68); Jack Schenberg (69); Pennsalt Chemical Corp., Philadelphia; A. Kulik (69); E. Seymour (70); and Clarence Carter (70), Continental Filling Corp., Danville, Ill.

Robert Hyndman was nearest to the pin, with J. W. Marcus and H. Wolf second and third in

Longest drive was hit by B. Couch, with Fred Lodes, Lodes Aerosol Consultants, Inc., New York, second, and Gene Rose, Gene Rose Co. of Chicago, third.

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Why Snell? Good question. Some of our clients have chosen us for our 40 years of professional experience; some for our million-dollar facilities; some for our experienced staff of 124; some for the fact that Snell services require no fixed overhead; you pay for what you use, not a penny more! Half of our projects are billed out at less than \$1,000. Best reason of all... but why don't you get in touch with us and find your own reason to use

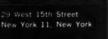
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Brulin's 25th Year

(From Page 95)

Mrs. Nottingham, an Indianapolis school teacher, is the widow of Julius Dulin, who passed away in 1952. Mr. Dulin constituted Brulin's first actual sales force, and in later years did administrative work. His late father, Mr. James Dulin, was Brulin's first bookkeeper.

Present general manager is R. M. (Sam) Bradford, who attended Indiana University and rose to an official position with the Indiana State Income Tax Division before joining Brulin.

Heading Brulin's research and development program is H. L. Green, who holds a master's degree in chemical engineering from the Ohio State University. He did his undergraduate work at the City College of New York. His assistants are J. A. Neuberger, graduate of Polytechnic Institute of Brooklyn and presently a candidate for a master's degree at Butler University; and D. C. Fromm, a graduate of U.C.L.A.

Other administrative personnel include H. R. Gaalema, who attended Indiana and Butler Universities, credit manager and chief accountant; C. K. Doty, a Butler graduate, accounts payable section; W. R. Seggebruch, accounts receivable, and another former Car-Na-Var employee; and W. E. Bell, traffic manager, also with previous experience at Car-Na-Var.

Still others are R. H. Brunner, graduate of Purdue University, sales promotion and advertising; H. C. Childress, graduate of the University of Arkansas, assistant field sales manager; and D. R. Olson, graduate of Northwestern University and the University of California, manager of Brulin's Oakland plant.

Since much of the company's promotion work in the fields of floor finishes and cleaning solvents is directed to safety engineers. Brulin is proud to have obtained as a safety consultant, the retired former safety director for The Kroger Company, Roger J. Bear, a graduate of Washington and Lee University.

Brulin confidently faces the future. Its guiding philosophy was perhaps best expressed by Mr. Casey, writing the foreword to an early Brulin products catalog:

"When we first considered this catalog . . . we visualized a sensational streamlined masterpiece that would convey . . . our enthusiasm.

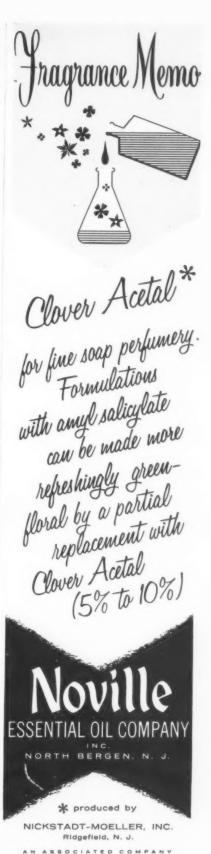
"When we actually started to work, we realized the impossibility of dressing quality in a cloak of ballyhoo, because the very essence of quality is simplicity and goodness.

"We take great pride in Brulin products, because they have fulfilled their purpose of giving our customers a little more than they expect, and have placed us in a secure position, where we may continue to serve our friends for years to come . . . We manufacture no freak products for which we can make numerous startling claims, and we attribute our success to no great secret unless doing a job well can be considered as such."

Pyrethrum Growers Visited

Pyrethrum exports to the United States will continue to be economically important to the Congo, Tanganyika, and Kenya, regardless of their political status. This opinion was expressed by Dr. Herman Wachs of Fairfield Chemicals, Division of Food Machinery & Chemical Corp., New York. Said to be the developer of piperonyl butoxide, pyrethrum synergist, Dr. Wachs has just returned from a tour of Africa's main pyrethrum growing regions. Kenya, Tanganyika and the Congo supply approximately 98 per cent of the United States' pyrethrum requirements.

Piperonyl butoxide combined with pyrethrum extract is formulated by Fairfield into "Pyrenone," an insecticide base for use in household, industrial and agricultural insecticides.





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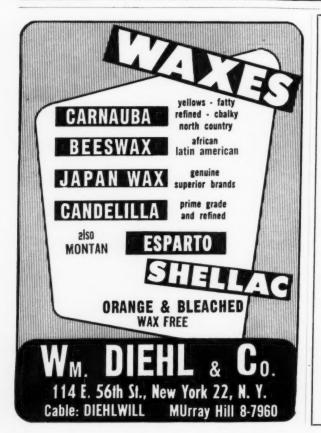
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ADM Plans Expansion

Archer-Daniels-Midland Co., Minneapolis, recently disclosed that it has earmarked \$26 million for investment in new plants, products and equipment in the next two years. John H. Daniels, president, reports that the firm's directors have approved a budget of more than \$11 million – highest in the company's history—for the current year as part of the plan.

A major item in the ADM plan is the construction of a new multimillion dollar chemical center in Peoria, Ill. Completion of the plant is scheduled in 1962.

*

Eastman Sales Manager

Eastman Chemical Products, Inc., Kingsport, Tenn., a subsidiary of Eastman Kodak Co., announced last month that Frank W. Abernathy has been named a district sales manager for its chemical division.

Mr. Abernathy moves to the Boston area from the New York



Frank W. Abernathy

sales office, where for five years he has served as a sales representative.

Emery Price List

Emery Industries, Inc., Cincinnati, issued recently its current price list for fatty acids, effective August 30, 1960. Prices are quoted on a per-pound basis for tankcar, car, ton-lot, and less than ton-lot loads.

Certified Products List

The American Hotel Association announced last month that its new product certification program on chemical specialties is now open. The 1961-1962 "certified products" list will include only those products which have been certified as meeting the new 1961-1962 specifications by Foster D. Snell, Inc., New York.

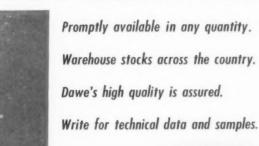
The purpose of this first revision since the program was set up in 1959 is to provide institutional purchasing agents with a current performance guide to the many cleaning and polishing compounds now on the market. The new specifications reflect changes in testing techniques and revised performance requirements suggested since 1959, AHA claims.

The list of products certified has been expanded to include:

Abrasive cleaners, porcelain, rug and carpet cleaners, dishwashing compounds (hand and machine), floor cleaners and metal polishes, and many other chemical specialty products.



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Aerosol Techniques, Inc	139
Air Reduction Chemical Co	
Allied Chemical Corporation,	
General Chemical Div38, 13	4, 135
National Aniline Division	26
Nitrogen Division	184
Solvay Process Division2nd	Cover
American Agricultural Chem. Co	.64, 65
American Cyanamid Co	161
Antara Chemical Div., General	
Aniline & Film Corp.	30
Argueso & Co., M.	
Arizona Chemical Co	
Armour Industrial Chemical Co	13
Aromatic Products, Inc	87
Atlantic Refining Co.	10, 11
Averil, Inc.,	139
	105
Badertscher, A. Edison	195
Bareco Wax Co., Division of	00
Petrolite Corp.	
Barr & Co., G.	
Blockson Chemical Co	
Books	
Builders Sheet Metal Works, Inc	140
Candy & Co.	. 4
Celanese Plastics Co	. 118
Chase Products Co.	. 139
Chemical Specialties Mfrs.	
Assn	. 108
Colgate-Palmolive Co	28
Commercial Solvents Corp	74
Consolidated Packaging Machinery	
Corp.	154
Continental Filling Corp	122
Continental Oil Co	166
Cowles Chemical Co	180
Cox, Dr. Alvin J.	195
Dawe's Laboratories, Inc	203
Dema Engineering Co.	14
Diehl & Co., Wm	202
Dodge & Olcott, Inc.	
Dow Chemical Co	190
Dow Corning Corp	
Dura Commodities Corp	
Durez Plastics Division	
Eastern Can Co.	132
Eastman Chemical Products, Inc	85
Emery Industries, Inc.	46
Emhart Mfg. Co.	150
Enjay Chemical Co., Div. of	200
Humble Oil & Refining Co	36
The resulting Co	4747
Felton Chamical C-	22
Felton Chemical Co,	23
Firmenich, Inc.	6
Firmenich, Inc.	6
Florasynth Laboratories, Inc	

Food Machinery & Chemical Corp	
Chlor-Alkali Division	
Food Machinery & Chemical Corp Chlor-Alkali Division Fairfield Chemical Div4th	Cove
Mineral Products Division	1
Fritzsche Brothers, Inc	18
Gard Industries, Inc.	13
Gillespie-Rogers-Pyatt Co	
Giyaudan - Delawanna, Inc106, 12	72. 17
Goodrich Chemical Co., The B. F.,	9
Gottscho, Inc., Adolph	15
Grestco Dyes & Chemicals, Inc	13
Gross & Co., A.	
Harchem Division, Wallace &	
Tiernan, Inc.	20.
Hercules Powder Co3	4, 19,
Hooker Chemical Corp	19.
Houchin Soap Machinery Division.	15
Hudson Laboratories, Inc.	
Jefferson Chemical Corp.	178
Johns-Manville	_ 16-
Jones & Co., R. A.	152
Kaysing Corp.	. 130
Kiefer Machine Co., The Karl	. 148
Kiwi Coders Corp	. 141
Knox Glass, Inc.	
La Wall & Harrisson	
Leberco Laboratories	
Leedpak, Inc.	. 139
Lewers, Dr. W. W.	. 195
Maas Chemical Co., A. R.	. 27
Magnus, Mabee & Reynard, Inc	
Mantrose Corp., The	68
Manufacturers Aid Co	
Marchon Products Co., Ltd	
Mazzoni, S.p.A., G.	146
McCutcheon, Inc., John W195	, 202
McLaughlin Gormley King Co	
Metro Glass Division	
Morton Chemical Co.	
MRM Co.	138
Neumann, Buslee & Wolfe, Inc	203
Newman-Green, Inc.	128
Newman Tallow & Soap	ine
Machinery Co	
Norda	
Noville Essential Oil Co	201
Onyx Chemical Corp.	174
Orbis Products Corp.	25
Owens-Illinois Glass Co.	133
Pace, Inc.	143
Penick & Co., S. B	102
Perry Brothers, Inc.	75

Peterson Filling & Packg. Corp115, 13
Pfizer & Co., Charles 16
PFW
Philadelphia Quartz Co 1
Pilot Chemical Co. of California18, 17
Precision Valve Corp12
Price, Dr. Donald 19.
Procter & Gamble Co 40
Protective Lining Corp 120
Ralm Products, Inc 139
Rapids Machinery Corp 160
Risdon Mfg. Co 136
Rohm & Haas Co 88
Roure-Dupont, Inc66, 67
Schenectady Varnish Co
Schrader's Son, A 120
Scientific Associates, Inc 195
Shulton, Inc. 17
Sindar, Inc 110
Foster D. Snell, Inc
Solvents & Chemicals Group, The 176
Stalfort & Sons, Inc., John C 140
Stepan Chemical Co 7
Stillwell & Gladding, Inc 195
Sun-Lac, Inc. 140
Surfact-Co., Inc. 194
m
Tex-ite Products Corp 140
Thomasson of Pa., Inc 140
Tombarel Products Corp 156
una de la de
UBS Chemical Corp 94
Ultra Chemical Works, Inc32, 33
Ungerer & Co3rd Cover
Union Carbide Corporation,
Silicones Division
1
U. S. Borax & Chemical Corp. 29
U. S. Bottlers Machinery Co 144
U. S. Hoffman Can Corp. 142
U. S. Industrial Chemical Co
C. S. Industrial Chemical Co 92
van Ameringen-Haebler Div. of
International Flavors &
Fragrances Inc 71
Fragrances, Inc
Van Dyk & Co., Inc
Verley & Co., Albert 15
Verona Aromatics, Division of
Verona Pharma Chemical Corp 31
Victor Chemical Works 168
Washburn Co., T. F 111
West End Chemical Co 8
Western Filling Corp 140
Wisconsin Alumni Research
Foundation 195

COMING MEETINGS

American Oil Chemists Society, fall meeting. New Yorker Hotel, New York, Oct. 17-18.

Association of American Soap & Glycerine Producers, 34th annual... convention,... Waldorf-Astoric Hotel, New York, Jan. 25, 26 and 27, 1961.

Canadian Manufacturers of Chemical Specialties Association. 3rd annual convention. Queen Elizabeth Hotel, Montreal, Oct. 24-26.

Chemical Specialties Manufacturers Association, 47th annual meeting, Hollywood Beach Hotel, Hollywood, Fla., Dec. 3-9; 47th midyear meeting, Drake Hotel, Chicago, May 15-17, 1961.

Entomological Society of America. Southeastern Branch. 35th annual meeting, Admiral Semmes Hotel, Mobile, Ala., Jan. 23-25, 1961.

Industrial & Building Sanitation-Maintenance Show and Conference, Sheraton-Cadillac Hotel, Detroit, Oct. 24-27.

National Packaging Exposition and Conference, Exposition Center, Chicago, April 10-14, 1961.

National Sanitary Supply Assn., 38th annual convention, Conrad Hilton Hotel, Chicago, April 23-26, 1961.

National Sanitary Supply Association, West Coast meeting, Hotel Ambassador, Los Angeles, Oct. 22-24.

New York Premium Show and Premium Advertising Conference, New York Coliseum, Sept. 25-28, 1961.

Northwestern Weed Control Conference, 15th annual, Hotel New Yorker, New York, Jan. 4-6, 1961

Packaging Institute, 22nd semingr, Statler Hilton Hote!, New York, Oct. 31, Nov. 1, 2.

Packaging Machinery Manufacturers Institute, (PMMI) fourth annual show, Cobo Hall, Detroit, Nov. 7-10, 1961.

Society of Cosmetic Chemists. Chicago Chapter. Oct. 11. Nov. 8.

Society of Cosmetic Chemists, annual meeting, Biltmore Hotel, New York, Nov. 29.

Synthetic Organic Chemical Manufacturers Association, monthly luncheon meeting, Roosevelt Hotel. New York, Oct. 11, Nov. 10; annual meeting and annual dinner, Dec. 8.

Toilet Goods Association, 26th annual meeting, Waldorf-Astoria Hotel, New York, May 9-10-11, 1961.

Toilet Goods Association, Scientific Section, Waldorf-Astoria Hotel, New York, Nov. 30.



tale ends

THE Canadian Manufacturers of Chemical Specialties Assn. meets starting Oct. 25 at the Queen Elizabeth Hotel in Montreal. A really cordial welcome as usual awaits all representatives of American manufacturers who show up for the meeting. An interesting program with a number of outstanding speakers has been arranged. "Mr. Dynamo" in the person of Geoffrey H. Wood, president of CMCS and also president of G. H. Wood & Co. of Toronto, will preside at the meeting. He assures us that a truly royal welcome awaits visitors from the States.

A hearing before the Federal Trade Commission on a false floor wax advertising claim was held Sept 12 in the U. S. Court House at Honolulu, Hawaii. Now, the respondent, Continental Wax Corp., is located in Mt. Vernon, N. Y. The FTC, the last we heard, was still located in Washington, D. C. But the hearing was held in Hawaii, the land of exotic flowers and hula girls. Looks like a switch. Maybe FTC is determined to introduce an aura of beauty at its hearings henceforth.

In a recent Sunday edition, The New York News broadcast to its several million readers the story of one Benjamin T. Babbitt, one of America's pioneers in merchandising soap and soap powders in individual packages. Babbitt was born in 1809 and died 80 years later in New York. Primarily, he was a mechanic who made pumps, engines and machinery. But he still had time to make a lot of money in soap. His first big marketing success was in 1836 when he marketed packaged bicarbonate of soda, in those days known as saleratus. Maybe one key to his unusual marketing success,—he was a close friend of P. T. Barnum.

Years ago in a soap plant in Newark, N. J., we remember seeing the results of a soap kettle boiling over, tons of hot soap running out the windows and down the front of the building producing a real Jack Frost effect. Now, Newcastle on Tyne, England, goes one better. The dust collector at a soap plant jammed permitting clouds of fine soap dust to billow out and settle over the city streets. Then it rained. Foam and slime were ankle deep. People slipped, cars skidded. In the true British tradition, the plant superintendent pronounced it an "exceptional occurence." Probably the understatement of the year.

Manufacturers of bird glues and chemical repellents had better look to their laurels. From California comes word of a new device that gives an explosive blast every four or five minutes. It looks like a trench mortar, is portable and especially made for use by industrial plants who have pigeon and other bird problems. The thing works by acetylene like one of these kid's toy cannons, but it gives a real "boom" and is said to scare the daylights out of the birds. The machine is made by B. M. Lawrence & Co. of 244 California St., San Francisco, 11.

Mel Fuld, chairman of Fuld Bros., skipped his first CSMA board meeting in many years earlier this month. Mel had his gall bladder removed on Sept. 12. He's recuperating nicely at home and is due back on the job any day now. Both Mel and his giant brief case were missed at the CSMA board meeting in Wilmington.

John Cassullo, president of Fritzsche Brothers, New York perfuming materials firm, turns out to be a whale of a fisherman, in addition to his talents as a sales-executive and yachtsman. Had his picture in the paper recently when he caught a 251 pound swordfish off Montauk Point, L. I. The address by Howard Morgens, prez. of P&G, on the subject of advertising before the recent conference on marketing of the Industrial Conference Board, was one of the best of his career, those who heard it tell us. Two days as a wilness during an F.T.C. hearing on the matter of the Clorox acquisition left Howard gasping over the appalling ignorance of the role of advertising on the part of too many government officials. His address, which begins on page 17, was not lacking in an intensity of sincerity that was vividly communicated to his audience.

A new snake repellent has been developed down Georgia way by Dr. James H. Jenkins of the University of Georgia, It is a granular material which when applied to gardens, lawns and fields at the rate of one pound to 420 square feet really makes snakes of all kinds take it on the lam. Tests show that they don't like the stuff at all and quickly scram out of a treated area. Experimentation, they tell us, has brought down the price of the product where it is now available to any home owner who doesn't like snakes around.

The millionth person to enter the Canadian National Exhibition, Marcel J. Moreau, a Canadian Pacific Railroad switchman, is shown with his wife and ten children. As the millionth person, G. H. Wood & Co., Toronto, Canada, made him "A millionaire for a Day." He is shown depositing the full bank interest on \$1 million, for one day, at the Canadian Bank of Commerce. Mr. Moreau also won 25 Canadian silver dollars from Wood's "Million Dollar" gold and silver show at the exhibition, which was staged to stress the huge cost of preventable sickness. Wood also started \$10 savings accounts for each of Mr. Moreau's 10 children. So successful was the idea that Wood is extending it to include the 1,500,000th, two millionth, and so on up to the three millionth person to pass through the Exhibition's turnstiles. Each will become a millionaire for a day and receive 25 silver dollars.



